BRITAIN'S LEADING MAGAZINE FOR THE AMSTRAD CPC 464, 664 AND 6128

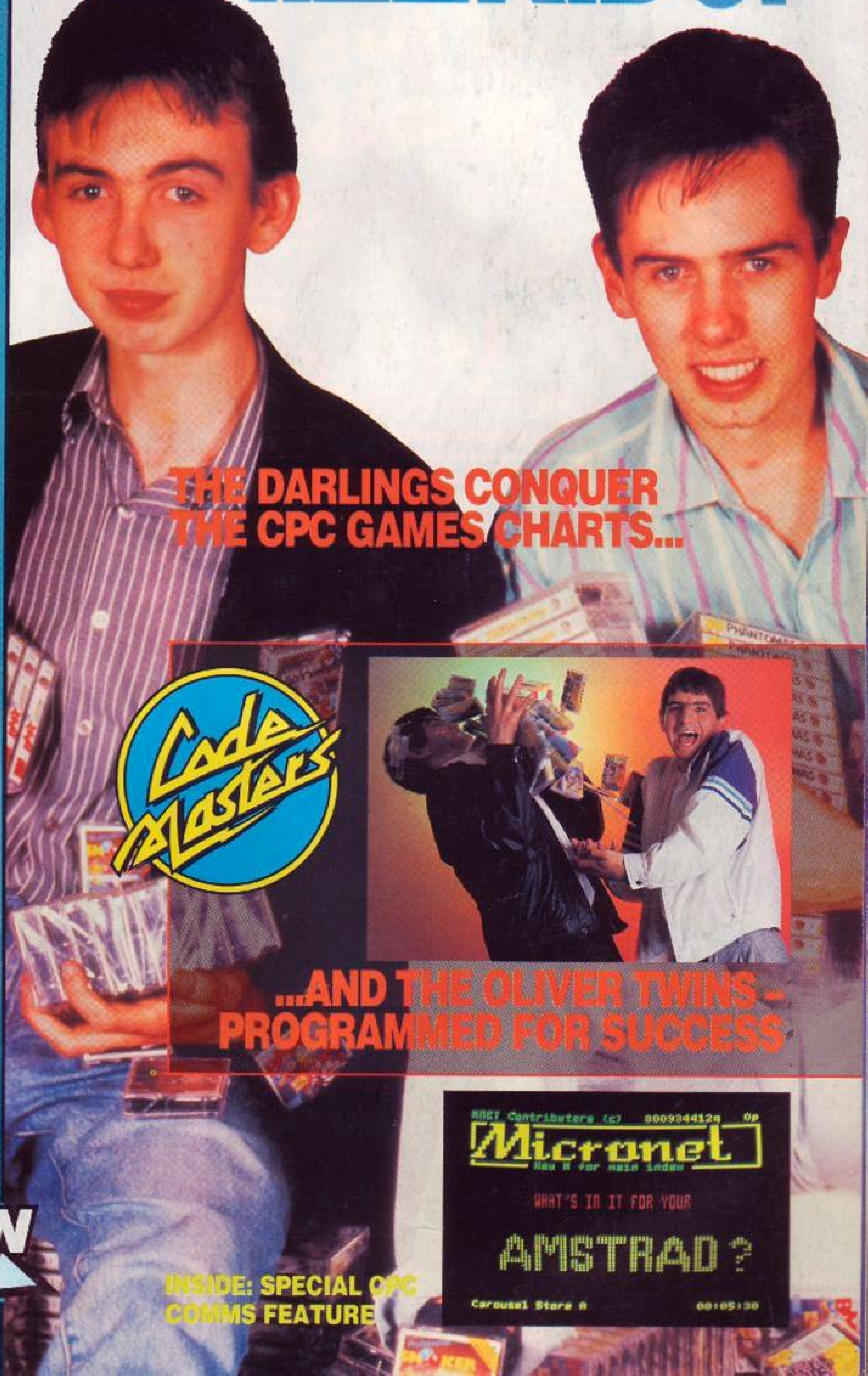
No. 35 ● SEPTEMBER 1988 ● £1.25

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AMSTRAD ACTION

THE MOULD-BREAKING MAGAZINE FROM FUTURE PUBLISHING

WHIZZKIDS!



THE DARLINGS CONQUER THE CPC GAMES CHARTS...

...AND THE OLIVER TWINS - PROGRAMMED FOR SUCCESS

INSIDE: SPECIAL CPC COMMS FEATURE

ENLIST FOR HI…







EVERY GAME A SMASH HIT!

WIZBALL A superlative piece of software. Slick in virtually every aspect, wholly original and immensely playable. (Zzap) **ZZAP SIZZLER AMS ACTION – MASTERGAME SINCLAIR USER – CLASSIC CRASH SMASH.**

SHORT CIRCUIT The two games are excellent and have delightful graphics. The variety is the real clincher, with something for everyone. (Amstrad Action).

ARKANOID This is a magnificent conversion, faithfully capturing the feel, atmosphere, look and sound of the Taito original. (Zzap) **PCW HALL OF FAME/YOUR SINCLAIR – MEGA GAME SINCLAIR USER – CLASSIC.**

HEAD OVER HEELS is one of the most addictive, playable, cuddly, cute and fun games ever. Miss it at your peril. (Crash) **CRASH SMASH AMS ACTION – MASTERGAME ZZAP SIZZLER.**

THE GREAT ESCAPE "THE BEST ARCADE ADVENTURE" 1986 NEWSFIELD READERS AWARD Unquestionably the best arcade adventure so far this year – don't miss it. (Zzap) **YOUR SINCLAIR – MEGA GAME**

COBRA Go out and buy it now, no self-respecting games player should be without a copy. The graphics are superb and the scrolling is very effective. (Crash) **CRASH SMASH**

FRANKIE GOES TO HOLLYWOOD This is a highly innovative arcade/adventure that you must not be without (Crash) **CRASH SMASH**

FREE YIE AR KUNG FU NEWSFIELD "BEST GAME" AWARD. Easily the best of the martial arts programs because of the variety of characters and excellent arcade style playability. (Crash) **CRASH SMASH**



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SCORE ACTION





10 SUPER ACTION ARCADE HITS

MIKIE Plays a knockout frantic farce in the classroom, locker room and the high school cafeteria. Hip-zap, door attack, throw balls and pies but can you make him hand over his love letter to his girl-friend?

JAIL BREAK It's every prison warden's nightmare – the inmates have broken out. These men are hardened criminals, armed to the hilt and aren't afraid to gun you all down. Just move in, knock 'em down and round 'em up. Easy!

GREEN BERET RESCUE THE CAPTIVES! You are a highly trained combat machine. Your mission: infiltrate all four enemy Strategic Defence installations – alone, against immeasurable odds.

YIE AR KUNG FU II Eight more deadly opponents to combat as you advance to become a black-belt master. Authentic fighting moves with 4 different locations.

SHAO-LIN'S ROAD Our hero has finally mastered the secret martial art "CHIN'S SHAO-LIN" but is trapped by triad gangs. With kicks and other secret powers, escape from and travel SHAO-LIN'S road to freedom!

NEMESIS The planet Nemesis, is now under an all-out space attack beings from the sub-space star cluster of Bacterion. You will need all your courage and concentration to win. Get ready to blast off!

HYPER SPORTS Continuing the challenge where "TRACK and FIELD" left off. Archery, Skeet Shooting and Weight Lifting are just some of the featured events to test your skill and stamina.

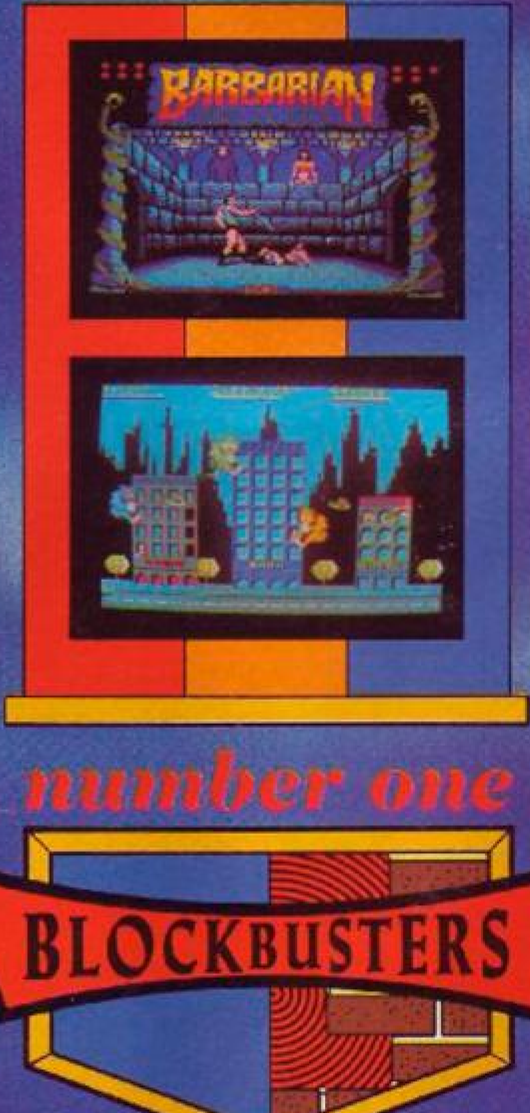
PING PONG You can almost feel the tension of the big match breaking through the screen ... the expectant crowd is almost on top of you! You return the service with a Top-spin Backhand, then a Forehand Back-spin, the ball bounces high, from your opponent's looping, defensive lob ... SMASH! ... a great shot opens the score ...

JACKAL Get into this and you'll never get out ... The plan – codename JACKAL – is to drop a squad of 4 crack troops behind enemy lines. Rescue a group of prisoners and whilst under attack, deliver them to helipads. Their final objective is to knockout enemy headquarters. Simple eh?

YIE AR KUNG FU Become a grand-master but to achieve this you must defeat a variety of deadly opponents, armed with different skills and weapons and must be overcome with a combination of 6 different attack moves.

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number one

BLOCKBUSTERS

ALL THESE CHART TOPPING HITS IN A SINGLE GIANT PACK

RENEGADE In the knife-edge world of the vigilante there is no place to rest, no time to think – but look sharp – there is always time to die! You will encounter the disciples of evil whose mission is to exterminate the only man on earth who dares to throw down the gauntlet in their path – the Renegade. PLAY RENEGADE ... PLAY MEAN!

IK+ They called International Karate 'the greatest Karate beat 'em up yet' (Commodore User). And who are we to argue? But ARCHER MACLEAN has come up with a stunner. A third fighter. An amazing animated background. New moves (including double head-kick and a spectacular backflip). Re-mixed music by ROB HUBBARD.

SUPER SPRINT Licensed from Atari Games' original money-spinning coin-op, one or two players compete head-to-head over eight gruelling tracks and four levels of game difficulty. Avoid the hazards and collect golden spanners to enhance custom car features – the key to Super Sprint. With detailed animation and sound effects, Super Sprint brings the best driving excitement ever to be experienced on home computers.

RAMPAGE The game where the nice guys don't get a look in. Grab your way through Chicago, punch up New York, and jump on San Francisco. Three indescribably nasty characters which bear a remarkable likeness to King Kong, Godzilla and Wolf-man, need you to send them on a rampage in an enduring 150 days of destruction, through 50 different cities.

BARBARIAN THE STORY SO FAR ... The evil sorcerer Drax has sworn to wreak an unspeakable doom on the people of the Jewelled City unless Princess Mariana is delivered to him. However, he has agreed that if a champion can be found who is able to defeat his demonic guardians, the Princess will be released. From the wastelands of the North, comes an unknown barbarian, a mighty warrior, wielding his broadsword with deadly skill. Can he vanquish the forces of Darkness and free the Princess? ONLY YOU CAN SAY...

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THE LINE-UP

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FRONT END

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10 AMSCENE
News, upcoming releases, roundup of the new budget titles – if it's happening it's here.

33 HELPLINE
The Helpliners are a band of noble people who dedicate themselves to assisting their fellow Amstrad addicts. It's a great way to solve problems, make friends and learn stuff.

SERIOUS SIDE

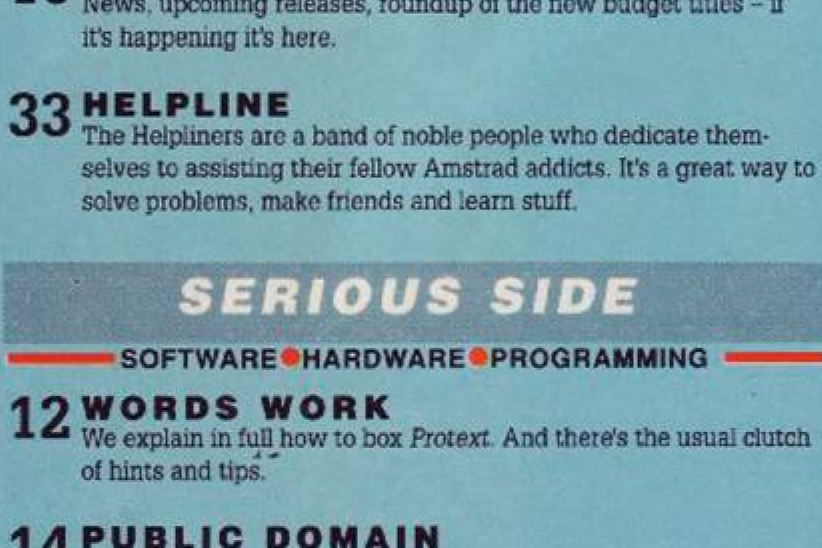
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CPC PD. OK?

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HOW the Darlings started. WHY they succeeded. WHEN a car crash nearly terminated their career before it started. And we grill their best know programmers, the famous Oliver twins about life, the CPC and everything.



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The latest Codemasters project from Richard Darling.



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It's good, it's very good. But what you want to know is: is this *really* the first role-playing game for the CPC?



40 **FOOTBALL MANAGER II**
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41 **MICKEY MOUSE**
Gremlin present Disney's loveable cartoon character in a platform game that's much more than that.

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Also in *Action Test* we bring you definitive reviews of *Night Raider, Street Sports Basketball, Battle Ships, Chubby Gristle, Psycho Pigs* and *Droids.*

59 **THE PILGRIM**
If it's adventuring you're into, The Pilg is quite simply the best there is: and he writes for *AA*. Four whole pages packed with news, reviews, Clue Sniffing, Lords and Ladies...

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FOR THE PEOPLE • *BY* THE PEOPLE

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If you've discovered a nifty trick or tactic, don't keep it to yourself – after all, you could earn £20 just for passing it on!

52 **TYPE-INS**
Five pages of listings that will entertain, educate and occasionally amaze you. And quality is guaranteed, because we offer as much as £100 if a program really wows us!

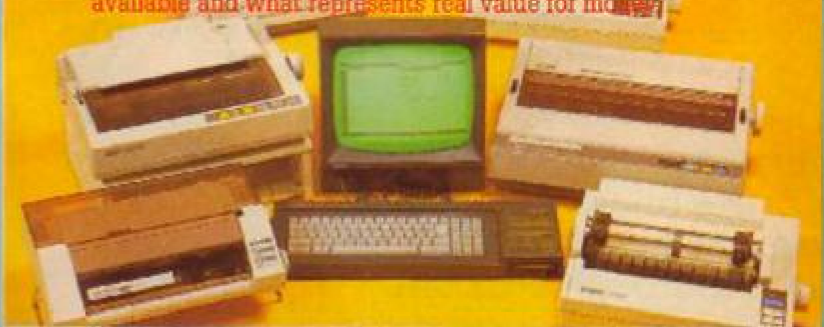
64 **CHEAT MODE**
Our readers aren't content with just playing with their games – they want to hack them to pieces, too! This month someone's gone and written a screen re-designer for *Arkanoid*. Once again there's a substantial reward at stake for the best tips and pokes.

WRAPPING UP

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For just a fiver you can connect with thousands of CPC users just waiting to buy what you have to sell.

68 **BUYERS GUIDE**
This mo[illegible] the complex [illegible] – what's available and what represents real value for mo[illegible]



71 **SPECIAL OFFERS**
Outstanding offers on software, plus our extraordinarily generous subscription offer!

Price fighters

In this issue you'll find revealing interviews with the Darling brothers and the Oliver twins. Talking to them set me thinking about the scandalous pricing of CPC games. Here are Codemasters producing perfectly good games on tape for £2, give or take a penny. And on the other hand there are others producing perfectly good games, on tape and disk, for five and eight times the price.

Now the common argument is that software costs according to its development, so that games that are quick to write are cheap to sell, and likewise a game that takes months to write will be expensive. It's not quite that simple, though. I doubt that anyone unfamiliar with the CPC would be able to guess which games cost £2 and which £15. If *BMX Simulator* had been a full price game, would you have been shocked?

Codemasters are not on some mission or crusade, however. They sell cheap because cheap sells. They don't need to worry a great deal about piracy. They don't need to worry too much about timing their releases. They're making lots of money. I wonder why the others don't follow suit. Could it be just too easy to sell ten copies for £150 rather than having to shift 75 to make the same amount of money?

Steve

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REACTION

Readers' writes

Lurking horror

Am I abnormally stupid, or something? Way back in January when the Pilg reviewed *Gnome Ranger*, I declined to buy it on the grounds that I was still attempting to do the *Lurking Horror*.

I don't expect the software writers to make the games easy, far from it, but isn't there another way of getting help? Sending a letter means having to wait a week or two before you continue adventuring.

The Pilg helps with 'Lords and Ladies of Adventure' and 'Clue Pot' – but what if the game I'm playing isn't there?

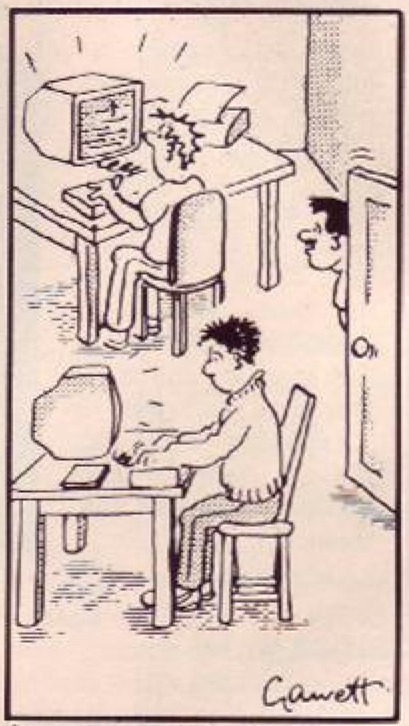
Isn't it possible to have some kind of phone line to the company that will give you hints? This may well be impossible to do, I don't know. Of course, the thing to do is to give hints with the game, or to give certain tips throughout the game (as some do).

I would be interested to see your reply - maybe I'm wronging a great many software companies – but there are the niggling few that have to make it difficult.

Samantha King
Luton

I sympathise, Samantha, to a certain extent – heaven knows how many times I've flung my joystick away in frustration or wanted to bash my keyboard because one game or another proves just impossible. On the other hand, who wants to spend £10 or more on a game that you finish within a week? Software houses have it difficult (sob, sob): trying to please all of the people all of the time is just impossible.

And your suggested solution – a phone-line – would prove just too expensive to run. I mean, would you pay £10 per call? Looks like you're going to have to rely on the Pilg and Cheat Mode like the rest of us!



'ANY OF YOU KIDS FANCY A GAME OF SNAKES AND LADDERS'

Voice of reason

44% of your readers are under 17. Can they really spend on average £14.66 per month on their computers? Or should you be aiming your articles at the other 56% who are older and also the real money spenders?

If Adventures account for 37.4% of all software bought, why did the Pilgrim only attract 11.2% in question 14? Something odd here.

Aha, more people buy word processors (5.8%) than full price games (47.2%). Are you still to continue to pander to the game playing school children?

I wonder who are the 41.6% who voted for *Action Test* ?

Bob Adams
Welwyn Garden City
London

Every so often we get a letter from a games player wondering why we bother to cater for those serious software users; or from a serious software user like Mr Adams, wondering why we bother to cater for games players. The truth is we need to satisfy both categories of user. The choice, in reality, is not between AA as a games mag and AA as a 'serious' mag: it's between AA as it is, and no AA at all.

After all it's precisely because the CPC is a genuine games/serious machine that it's put so much dosh in Mr A. Sugar's back pocket.

NZ program

```
10 'WORKS ON NEW ZEALANDERS ONLY
20 AA IN NZ = $83 + 3 MONTHS LATE
30 AA'S SUBSCRIPTION OFFER = $80 +2 FREE GAMES + DELIV
   ERED ON TIME
40 IF SHOP PRICE > AA'S PRICE THEN SEND AWAY FOR A SUB
   SCRIPTION:
   GOTO POST OFFICE OR BANK
50 READ HAPPILY EVER AFTER: END
```

Andre Nieuwenhuize
Christchurch, New Zealand

Subtle Difference

I progressed from a CPC 464 to a 6128, but I've still got the former. Some 464 tapes run on the 6128, and some won't. For example the *Tasword 464* tape won't run; the 6128 gives messages like 'TASWORD.BIN not found' although it CATalogs both Basic and binary files ok from the tape.

Why is this? Would a suitable poke help? (I can't get near the 464 for alien-zappers). I suppose I'll just have to buy *TAS-6128*.

R Corbett
Leigh on Sea

There is a difference in ready memory capacity between the 464 and 6128. Tasword 464 was actually written before the 6128 appeared, so you can't really complain about incompatibility. A poke wouldn't help, but a short program to turn the 6128 into a tape machine would: only snag is, you then can't use the disk drive. Maybe Tasword 6128 is the best bet after all, unless you want a leaner, meaner device – which Protext is.

CPC high profile

First there was the 464 on *Eastenders* and now the 6128 is in the GCSE French exam!

Picture the scene: it's a dull Friday afternoon and not only do I have to leave my beloved CPC 464 but I have to do a French exam. It's now about 1.20pm and I turn the page and see question six. Up till now there's been a bunch of frogs rabbiting on about shopping and naughtly kids. The question asks about a family discussing 4 computers: a Phillips? Two Thompsons? Or the Amstrad CPC 6128 at 4700 francs? Guess which computer the family choose? Yes, the 6128!

Ian Addicoat
Penzance

Hope that made things a little more interesting for you!

Has anyone else seen the CPC in an unusual place?

Address your remarks to: *Reaction, Amstrad Action*, 4 Queen Street, Bath BA1 1EJ.

Please note that the address for all mail-order enquiries and orders is: Clare Bates, The Old Barn, Brunel Presinct, Somerton, Somerset TA11 7PY, while all subscription matters (except orders – see the back of the magazine) are handled by Avon Direct Mail, PO Box 1, Portishead, Bristol BF20 9EG.

Two faced

The thing which annoyed me most about the *Multiface Two* was that I had to remove it every time I wanted to load software that will not load with it. Apparently, with the new *Multiface*, this is no longer the case, so is there any way of getting an upgrade – short of buying a new one, of course?

By the way, did you know that 27 issues of *AA* (nos. 7-34) weigh 5.5 kilos?

S. Jones
Latimer, Bucks

Yes. Send the unit back to Romantic Robot, and they will upgrade it for the sum of £15.95, so long as you haven't messed around with it yourself. Strange – AA7-AA34 makes 28 *issues.*



"THIS SHOULD DO THE TRICK..."

Multi pokes

I have a *Multiface II* and I've been wondering if there would be any chance of a section for the *Multiface* in *Cheat Mode* as I'm not able to produce pokes of my own.

Neil Davis
Birmingham

A good idea, and if we get some really good ones, we'll do a section. But we won't forget that not everyone can afford a Multiface.

From a glass house (as found)

Have you notice you cock-up? Well I have!!! Turn at the begining of your mag.,to you come to THE LINE UP.Do you see 57 SIMULATORS? If you turn to page 57 you get CLASSIC COLLECTION. If you turn to page 49 you do get SIMULATORS!!! Dur Brains!!! (No.34 JULY 1988)

Carl Wilson,
Kenilworth

Thank you Carl.

Maplin belts up

I found Richard Johnson's article on belt replacement in *Hot Tips* (*AA33*) extremely interesting as I have been suffering a lot from the old **Read Error b** syndrome on my ageing CPC464.

Accordingly I wrote to Maplin Electronics at the address quoted and eagerly awaited the solution to all my ills (or so I thought)! Imagine my chagrin, therefore, when several days later they sent me a little note to say that they don't stock replacement CPC464 cassette drive belts.

K Chapman
Pentre
Mid Glam

Quite unintentionally they are misleading you. In a similar fashion, CPC Ltd don't stock the AY-3-8912 sound chip. They do, however, stock the AM40001, which is exactly the same chip with a different part number. For a genuine Amstrad belt spare call CPC on ☎ 0772 555034: the part number is AM170204.

From Maplin (☎ 0702 554000) the order code is FD39 and the price is £1.80 including postage and handling. From CPC (the official spares people) it costs £5.75, their minimum order charge. Both prices assume that you are just ordering one item.

Memories of a dear departed editor

If Stock, Aitken and Waterman produced computer games as well as records would they all sound the same whilst loading?

My mum does not think there is enough sex appeal in your mag, so please print a photo of Bob Wade minus his shirt to keep her happy.

Andrew MacDonald
Eccleshall



Tell your mum to sit down, put her feet up and her glasses on and peruse at her leisure this striking picture of Bob 'Rambo' Wade. Until he departed the AA office for monitors new he was often to be found wandering around in this state. In fact that was the true reason he had to go!

Coming soon to these pages: Pat McDonald minus his socks.

Brunning shows the way?

Why is it that when I see software that interests me I have to buy to try? I have a CPC 6128 and my main interest is in serious software. Now as we all know serious software if it is any good tends to be expensive.

What I should like to see is more software houses offering a free trial on their software. I was interested in purchasing a spelling checker for Tasword when I came across an advert for *Brunword 6128* which includes a spelling checker. Remember now I just wanted to spell check a program; but what caught my eye in this particular advert was the magic words, 'Seven days free trial for disk versions'. Three days later I had in my possession one copy of *Brunword* to try for seven days and under no obligation to buy.

Now if one software house can do this with disk versions why cannot others follow suit? Is it that they think we are all software pirates or do they lack confidence in their products? Certainly if I am going to buy software in the twenty to fifty pound bracket then I want to make sure the software meets my requirements.

So, all you software houses, Brunning software has paved the way:do you dare to follow?



Les Ashton
Scunthorpe

P.S. For those of you wondering, I did *buy Brunword.*

Splitter can't split

Recently I bought a lightwave joystick splitter for *Gauntlet*. But it doesn't work, when you move one joystick both people move. So I took it back and the shop replaced it, but it had the same problem. I tried it on other games like *Barbarian* and *Rampage* but they all had similar problems. Have all my two player games got bugs, or is my 6128 not meant for lightware j/s, or is this just a coincidence?

James Williams
Brighton

The joystick splitter doesn't work properly due to a bad design. Get it sorted out with the aid of AA33's hardware project – and two player games will never be the same again. Try and get a local soldering freak to put it together.

Golden rules

Help! Who do US Gold think they are? They really cheese me off. About 6 months ago my dad got me *Winter Games* for

the 464, and it didn't work. So we sent it back to US Gold. They replied that I forgot to state which computer I own, so I wrote back telling them. After a while I wrote again... Still there was no reply, so I decided to phone up. They said, 'We'll take the matter into hand...' We wrote yet again and that was the last straw, so please will you help.

Lee Atkin
Didsbury, Manchester

We've printed Lee's letter (even though US Gold did indeed – and without any prompting from AA – sort out this problem) because it illustrates an important point.

Remember that companies such as US Gold sell thousands of games – in Amscene *this month you can read about Powerhouse selling 250,000 in six months – and inevitably there will be occasional problems.*

So if you write to a company, give them **all** *the information they need to help you – and that includes the computer you have, Lee! And if you speak to anyone on the phone you should always get their name and note down what they say. These are busy people!*

Astronomical discovery

On the subject of G R Gilham's 'Search for a Star' (*Reaction, AA*34) I believe that Amsoft's *Star Watcher* (soft 915) may well be the program he is looking for. One of Triptychs *Brainpower* series, it is both a teaching and applications program about the night sky. To quote the manual: 'The applications program you can use to display any part of the sky at any time of day or night'.

Whether it is still available I know not, but a user club may be a good source to try. I'm sure with a little delving Mr Gilham would be able to unearth a copy.

Mr S J Lee, Huntingdon

Thanks to all those who wrote in with this information. Unfortunately, as Mr Lee suspects, Star Watcher *has been discontinued, though it may still be available on the remainder racks. If you find a heap of them, let us know.*

One last-ditch try, Mr Gilham: there is a French 6128 program , entitled Astro 2001 Planetarium, *available from Semaphore France, Cernex - 74350 Cruseilles ☎ 50 44 02 91. It costs 325F (that's over £30): postage extra. It's also available in Switzerland and Belgium. Hope that helps. (Thanks to J.M. Dunnett for that.)*

Bad feeling

Public warning to all would-be CPC owners: do not register your computer with Amstrad! I did, and junk mail from the Software Mail Order Group is posted to the address I gave (not my present one), even though I informed Amstrad of my new address.

I've written to this 'group' for the past couple of years over 13 times to no avail.

Be warned – I can't get rid of them!

Ben Poole
Westcliff-on-Sea

Club together

Do you know of any Amstrad computer clubs in this area?

E Hughes
Rotherham

We would very much like clubs with CPC sections or connections to write to us and supply information about themselves. Mark all letters Club Spot *and send it to the Bath address. You'll get free publicity and, we hope, E. Hughes will establish contact with others of similar interests.*

Address problem

I congratulate you on 'The Joy of Hacking'. But how do I find the loading and run addresses?

M. Dickinson
Atherton, Manchester

By turning to Type Ins *and typing in our 'Advanced Header Reader' program, that's how!*

Sugarman by Sarkar



The CPC news

Alan chases youngsters

Amstrad are planning a two pronged autumn attack on the games hardware market, with a new bundled package of the CPC's in the autumn – aimed primarily at the 'homework' market – and a low-end PC-compatible machine.

The CPC deal, reported in *Computer Trade Weekly*, consists of a 6128, colour monitor, a box to turn the monitor into a colour television and a desk. (Don't forget the fabulous clock radio!) The price of this little lot comes to £499 – representing a saving of about £50 to the end user. If the rumour is true it would be the first time the CPC has taken a price cut, albeit by a roundabout route. It is variously seen as the CPC's death-knell and its salvation.

The other Amstrad games release, according to widespread rumours in the industry, is to be a sawn-off version of the PC1512 – originally released as the 'complete games/business' machine. Its failure was widely attributed to the poor quality of its screen output, and it seems likely that this new machine is to feature an enhanced graphics adaptor.

Sticky situation

Sugar's problem, however, is competition with the **Amiga** and **Atari** – particularly the latter, since the ST is expected to be repriced at £299. The solution, apparently, is for the first Amstrad to appear without a monitor. This is a risk, but it also points to the appearance of the machine with a **Sinclair** label, since that is how the Sinclairs have traditionally been sold.

Most extraordinary of all the recent rumours, however, was the suggestion – now apparently discredited – that the new Amstrad/Sinclair will be bundled with 100 (yes, two zeros there) games!

CPC implications

The combined effect on the CPC of these two rumours – the promotion of a CPC package and the appearance of a new games machine – is difficult to gauge. On the one hand the 'Homework' gimmick seems to indicate a continued place for the CPC in Amstrad's scheme of things, while on the other the new PC compatible – running MS-DOS rather than CPM, and probably equipped with 3.5 inch rather than 3 inch disk drive – clouds the issue completely.

In any case, Mr Sugar is known for his refusal to comment on future product releases, and this is no exception. Well-founded as both these rumours appear to be, it wouldn't be wise to bet money on it. Gloomy reports of the impending demise of the CPC are almost certainly premature and greatly exaggerated.

DPA bares teeth

The Data Protection Registrar, Eric Howe, has signalled a toughening up of attitudes towards companies and individuals found to have broken the Data Protection Act. Henceforth Howe has every intention of publishing the names of offenders rather than simply giving 'Mr X'-type case histories.

Howe reveals in his latest report that complaints about the withholding of rightful access to personal information held on computer files have risen fourfold in the twelve months to May of this year. Furthermore, he reports, 'research suggests there may be a growing unease on the part of the public, expressed in a decline in public confidence in many organisations to keep and use information responsibly'.

In particular Howe is known to share public concern with so-called 'lifestyle' files – information concerning people's activities, increasingly collected through consumer surveys and product registration cards. It is only recently, with the huge drops in the cost of computing power, that such files could be efficiently produced. The argument in their favour is that consumers can be specifically 'targeted' for products in which they are known to be interested.

The argument against this type of thing is that it is a totally unwarranted intrusion into people's business and none of their damn business.

'I have begun to receive complaints about these sorts of documents', Howe admitted, 'and will wish to see that the First Data Protection Principle – that information shall be obtained fairly – is being properly complied with'.

Gripping stuff



SBS Computer Supplies Ltd announce the **Grippa**, a copyholder to hold paper next to the monitor screen. It has a balljoint so that you can adjust the positioning to suit and you can choose to have it left or right of the screen. The pincers grip anything from a single sheet of paper to a notepad. The **Grippa** costs **£9.95** and is available from: **SBS Computer Supplies Ltd, Unit 3 Clarks Industrial Estate, Newtown Road, Hove, East Sussex BN3 7BA. ☎ 0273 726331**

Make your mark



Worried about your computer getting nicked? Mark your CPC, printer or whatever with your name and postcode in an invisible ink that shows up only under an ultraviolet lamp. Selling a security marked item is difficult for a thief, and if it is recovered by the police it's easier for them to return it to you.

Markitwise International's security marker kit, costing **£4.20**, is available through the **Tandy** chain stores and can be used on car windows, most household valuables and of course your humble CPC. **Markitwise International, Markitwise International, Maylite Trading Estate, Martley, Worcs WR6 6PQ ☎ 08866 226.**

Get a kick out of Gremlin



Gremlin Graphics have bundled together seven martial arts games in a compilation called *Karate Ace*. The seven games of gratuitous violence are: *Way of the Exploding Fist, Bruce Lee, Kung Fu Master, Avenger, Samurai Trilogy, Uchi Mata* and *Way of the Tiger*. Price is **£12.99 on tape** and **£14.99 on disk** and it's available now.

Free ride

Microprose have linked up with **WH Smith** to offer an opportunity at the **PC Show** to ride in the Prokon – a 14 seater simulator driven by a million dollar computer. Buy one of their games **before 12th of September** and you receive an invitation to go for a ride – and you'll also get a Microprose time-piece free. The **PC Show** runs from **Thursday 14th to Sunday 18th of September at Earls Court, London.**



New image for Mirrorsoft

Mirrorsoft have just launched a new entertainment software label called **Imageworks**. It joins the likes of **Cinemaware** (*Defender of the Crown*) and **PSS** (wargames) who are also under the wing of **Mirrorsoft**. Their first releases include two new CPC games: *Fernandez Must Die* and *Bomboozal*.

Fernandez is a one or two player shoot-em-up in the *Ikari Warriors* style. You travel around a very large playing area killing the hostile minions of the General Fernandez so that your country can be freed of his evil domination. Included in with the game is an A3 map of the world that shows places of interested for potential revolutionaries. It's entitled 'A Guide to Failed Revolutions' (do they mean rebellions, by any chance?). *Fernandez Must Die* is due in **October** and is to cost **£9.99 on tape** and **£14.99 on disk.**

Bomboozal is a puzzling game in which you guide a cute little green guy around screen after screen blowing up bombs and mines. Once all are destroyed you go to next level. There are other hindrances to your progress that must be avoided and there are some friendly droids who helps you too. Some levels of the game have been done by other programmers including **Jon Ritman, Andrew Braybrook** and **Jeff Minter**. It's due out in **November** at **£9.99 tape** and **£12.99 disk**.



Quarter million plus

During the last six months **Powerhouse** have sold over 250,000 games – making them (so they claim) one of the five most popular software labels in the UK – and with your assistance they hope to sell a whole lot more. Out soon are *Freedon Fighter, Juggernaut, Test Match* and *Formula One*.

Freedom Fighter is a multi-level shoot-em-up with loads of aliens just waiting to be disintegrated. The other three are all re-released **CRL** games: *Juggernaut* is an articulated lorry simulation/strategy game: *Test Match* a cricket program, and *Formula One* a car racing strategy game for up to six players. All four cost **£1.99 on tape.**

New releases

US Gold have released another arcade conversion, *Bionic Commando*. Ten years have passed since civilisation as we know it ended. The enemy is still around and they plan to annihilate the world *(again?)*. An elite unit of bionic commandoes are the only way to defeat the enemy and you control one of them in his attempt to save what's left of the world.

Another conversion by US Gold is *Road Blasters*, a futuristic racing game with gratuitous violence thrown in. Hurtle along the road blasting everything in sight and try not to get blasted in turn. Both available now and at **£9.99** on tape and **£14.99** on disk.



Echelon, Bushido, Leaderboard Collection and *History in the Making* are all due for a September release by **US Gold**. *Echelon* is a 3D vector graphics game involving a quest for a space pirate stronghold. No price at present. The orient is the setting for a 25 level maze in *Bushido*. A princess has been captured and assassins, samurai and even tigers stand between you and her rescue. **£9.99 on tape** and **£14.99 on disk.**

The *Leaderboard Collection* is a compilation of the four golfing games from **US Gold** – enough golfing action to occupy you during this excuse for a summer. Price **£14.99** on cassette and **£19.99** on disk.

History in the Making celebrates the first three years of **US Gold**. There's also a booklet filled with facts, figure and photographs for the three years. Yet again the price has not been fixed, but don't expect it to be cheap.

CRL are about to release *Jack the Ripper*, a game based on the Whitechapel murders of the late 19th century. Prime suspects in this adventure are a nasty bunch of devil worshippers. On the streets now at **£8.95 on tape** and **£14.95 on disk.**

Gremlin are about to release another game endorsed by Gary Lineker. *Gary Lineker's Super Skills* is a rigorous training programme to build up those essential goal scoring skills. **£9.99 on tape** and **£14.99 on disk.**



Action Force is released this month by **Virgin Games**. It's a smooth scrolling shoot-em-up in which you must clear a path for A.W.E. Striker by building bridges and destroying hostile enemy forces. No price set at present.



WORDS WORK

WP user crosstalk with Pat McDonald

Better erm, what was it?

I see in the August edition of *AA* that **Martin Bolter**, like me, can't remember file names. He gave a solution, but this one is better, because it adds the facility to catalogue disks without stealing another option in the process.

Add these lines:

```
295 IF a=9 THEN MEMORY mh:MODE 2:PEN
1:CAT:PRINT TAB(28);"Press any key
to continue":CALL &BB18:GOTO 230
395 a$(9)="Catalogue
disk":b$(9)="D":b(9)=61
```

Change lines 400,470 and 500 to:

```
400 FOR j=1 TO 9:LOCATE
9,j*2+3:PRINT a$(j):LOCATE
31,j*2+3:PRINT b$(j):NEXT j
470 a=0:FOR j=1 TO 9:IF INKEY(b(j))
<> -1 THEN a=j
500 PEN 3:LOCATE 9,j*2+3:PRINT
a$(a):LOCATE 31,a*2+3:PRINT
b$(a):PEN 1
```

This enables you to **CAT** any disk and then returns you to the main menu to load your file. Lines 400,470 and 500 just change the loop from 8 to 9 and change the y-axis location from +4 to +3.

Being able to **CAT** saves you from duplicating file names as well as reminding you of the name of the file you wish to load.

T H Spence, Lerwick

Skip the perforations

I use *Tasword 6128* with a Brother M-1009 printer, and have been trying unsuccessfully to use continuous paper (A4 size). I need to print copies of letter files and also to mail-merge letters but no matter how hard I study and follow the manual, whether I use the printer control character 'u' or not, I either get no form feed or a form feed of a whole page length. All I want to do is skip the perforations – help!

P G Richards, Rosyth

I'm sorry to say that I've never been in contact with such a printer. Can a reader who has release this demented soul from using a large pair of scissors?

Tasword files are doing it for themselves

You can't merely add the file name after the **L** in the key expansion: *Tasword's* loading routine ignores it.

I thought that this might be due to the loading routine using a machine code **CALL &BB18 (KM WAIT KEY)** which ignores the expansion buffer and looks only at the keyboard buffer, instead of a **CALL &BB06 (KM WAIT CHAR)** which would accept any further text we've put into the expansion buffer. This guess proved correct. A little searching of the **TASCODE** files for **&BB18** reveals that if we **POKE &1BF3,6** we can alter the loading routine's **CALL &BB18** to the **CALL &BB06** that we want in order to autoload from the **L** catalogue.

So I added the following line to my *Tasword* (V1.09) Basic loader:

```
155 POKE &1BF3,&06:CALL t+54:GOSUB 20:MEMORY 1-1:KEY 159,
CHR$(183)+CHR$(184)+"Ltextname"+CHR$(13):POKE &B62B,0:POKE &B629,159:CALL
t:CLOSEIN:MEMORY t-1:POKE &1BF3, &18: IF PEEK(t)=195 THEN STOP ELSE 170
```

The first **POKE** installs the **KM WAIT CHAR** we want for autoloading. The expansion key removes help and holds the textname of the file you want autoloaded. The last **POKE** restores the loading routine to **KM WAIT KEY**. By making all this a new line **155** we ensure that it is only executed once, on first loading *Tasword*.

SAVE this modified loader under any convenient name and you can have your chosen textfile autoloaded onto a no-help screen by simply typing:

RUN"name".

Rev Peter F Taylor, Rayleigh

Pound and a hash

In *Words Work AA34* page 21 there was a letter asking about the pound sterling sign (£) not printing unless the dipswitches were preset. There is a way round this.

I have redefined my printer control characters to change between the UK character set and the USA character set. I use the inverse "A" for UK, the full printer code is: 27, 82, 3. The code for the USA is (using inverse "a"): 27, 82, 0. There are a number of other sets and by altering the last number "0" to another number between 0 and 7 you can switch sets even in the same document.

N Orme, Wolverhampton

Dynamic Duo

Here's a couple of listings. The first is a listing to remove the rubbish from around the edge of screens saved by *Mini Office 2* graphics program. To save a screen after drawing a graph just press **CTRL-S**.

When you run the program you will be prompted for a file name. The screen will then load, and the program will clean it up. Finally it's saved with the same file name.

```
1 'Excess space remover
2 'Rafe Aldridge 1988
3 '
10 MODE 2:INK 1,14
20 ON ERROR GOTO 250
30 SYMBOL  AFTER 32
40 SYMBOL
32,255,255,255,255,255,255,255,255,2
55
50 OPENOUT "dummy"
60 MEMORY HIMEM-1
70 CLOSEOUT
80 INPUT "File to be opened:",file$
90 INPUT "Manual or automatic:",mo$
100 IF UPPER$(mo$)="A" THEN mo=1
ELSE mo=0
110 MODE 2:PRINT "SEARCHING..."
120 WINDOW #0,1,80,3,25
130 OPENIN file$:OPENOUT file$
140 LINE INPUT #9,a$
150 PRINT STRING$(79,"_")
160 PRINT:PRINT a$
170 i=LEN(a$)
180 IF MID$(a$,i,1) <> " " THEN 240
```

We've had an increase in good word-processor tips – so much so that my helpful prose is much reduced this month. I regret that a move to create a national holiday to celebrate the occasion *(started by me -ed)* was thwarted at the last minute.

On the bad news front, the dreaded EEC levy has descended, making printer prices jump by a truly exortionate amount. See *Buyers Guide* for the full story. The people who suffer most, as usual, are the end users: us.

We've had people ringing up and writing about Neil Robertson's boxing *Protext* tip. Apparently everybody thought it was a really wonderful idea, producing graphs from a word processor. Unfortunately not many wanted to refer back to the author... because he lives in Australia.

Well, I'm pleased to say that M. Catton has come up with a similar listing but one which is generic – that is, you don't need *Protext* to be able to use it.

Ok crew: roll 'em!

Generic boxes

Neil Robertson's letter in the July issue on downloading characters into the printer has spurred me into writing a general-purpose program that enables any permissible character out of the 128 to be defined.

Which are permissible depends on the printer. My Citizen MSP10 for instance accepts all except characters 7 to 15, 18 to 20, 27 and 127, but most do not accept as many as that. Check your manuals to see which characters are usable.

```
10 PRINT #8,CHR$(27);":";CHR$(0);CHR$(0);CHR$(0)
20 WHILE complete <> 1
30   READ first, last
40 PRINT#8, CHR$(27); "&"; CHR$(0); CHR$(first);
   CHR$(last);
50   FOR character= first TO last
60     PRINT #8,CHR$(0);
70     FOR column= 1 TO 11
80       READ col
90       PRINT #8, CHR$(col);
100      NEXT column
110    NEXT character
120    READ complete
130 WEND
140 PRINT #8, CHR$(27);"%1";CHR$(0)
150 PRINT #8, CHR$(27);"|1"
```

Line 10 loads the contents of the character ROM into RAM. Line 140 instructs the printer to print all characters from RAM and 150 to print unused control characters. The WHILE-WEND loop loads data into RAM in blocks of consecutive characters, each block starting with first and ending with last. If the program is held on the same disk as a word-processor, adding a line to RUN"whateveritis loads the processor.

```
160 DATA 0,6
170 DATA 0,0,0,0,0,15,0,8,0,8,0
180 DATA 8,0,8,0,8,0,8,0,8,0,8
190 DATA 0,8,0,8,0,15,0,8,0,8,0
200 DATA 0,8,0,8,0,15,0,0,0,0,0
210 DATA 0,0,0,0,0,127,0,0,0,0,0
220 DATA 0,0,0,0,0,127,0,8,0,8,0
230 DATA 0,8,0,8,0,127,0,8,0,8,0
240 DATA 0
250 DATA 28,31
260 DATA 0,8,0,8,0,127,0,0,0,0,0
270 DATA 0,0,0,0,0,120,0,8,0,8,0
280 DATA 0,8,0,8,0,120,0,8,0,8,0
290 DATA 0,8,0,8,0,120,0,0,0,0,0
300 DATA 1
```

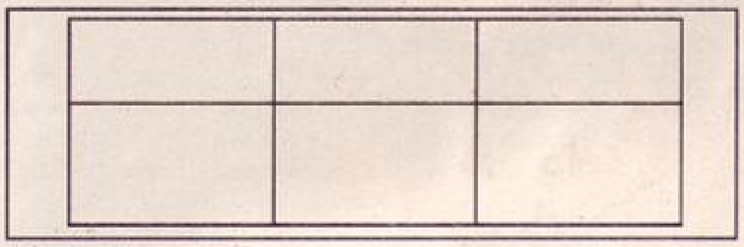
These illustrative DATA statements above define characters from 0 to 6 and 28 to 31, to produce 'box' characters similar to **Mr Robertson's** but more extensive. With them it is possible for instance to print a tabular grid, as shown below.

The characters are printed seven dots high. To make them join vertically they are preceded by ESC;"1", which changes the line spacing to seven dots. ESC;"2" will restore the normal 12 dot spacing. The characters are printed two dots below the normal ones. They can be aligned if required with ESC;"j";CHR$(6), which rotates the paper backward two dots. ESC;"J";CHR$(7) will rotate it forward again. Lastly, characters held in RAM can only be printed in draft mode. In NLQ the normal characters held in ROM are printed.

M Catton, Gosport

0	1	1	2	1	1	2	1	1	3
4		4				4			4
5	1	1	6	1	1	6	1	1	28
4			4			4			4
4			4			4			4
4			4			4			4
29	1	1	30	1	1	30	1	1	31

● Characters sent



● Characters printed

```
190 IF mo=1 THEN 220
200 PRINT:INPUT "Remove space
(Y/N):",t$
210 IF UPPER$(t$) <> "Y" THEN 140
220 i=i-1:a$=LEFT$(a$,i)
230 PRINT:PRINT a$:GOTO 180
240 PRINT #9,a$:GOTO 140
250 CLOSEIN:CLOSEOUT
260 PRINT:PRINT "Space removal com-
plete."
270 END
```

The second program is a follow up to the drama over extra spaces at the end of lines. This program removes those extra spaces quickly and neatly. First, save the program in ASCII form like so: SAVE "filename",A. Then run this program. It ask for the file name and then creates a new version, which execute just that little bit faster than normal.

```
1 'Mini Office 2 graph converter
2 'By Rafe Aldridge
3 '
10 MODE 2
20 WINDOW #1,1,3,1,25
30 WINDOW #2,1,80,22,25
40 WINDOW #3,67,80,1,25
50 WINDOW #4,1,80,1,1
60 INPUT "Filename:",file$
70 LOAD file$,&C000
80 PAPER #1,0:CLS #1
90 PAPER #2,0:CLS #2
100 PAPER #3,0:CLS #3
110 PAPER #4,0:CLS #4
120 MOVE 0,69:DRAW 640,69,0
130 MOVE 0,73:DRAW 640,73,0
140 MOVE 0,77:DRAW 640,77,0
150 SAVE file$,b,&C000,&4000
```

Rafe Aldridge, Woodford Green

Star quality

Did you know you can print double or quadruple sized characters on the Star NL-10 (or any other Star printer for that matter) in NLQ? The code for NLQ double height is 27,120,1,27,104,1. You get a really professional effect on posters.

When using A4 width paper in conjunction with an NL-10 and *WordStar*, the text can be properly aligned on the paper width. In non-page formatted style a left margin of 5 and right margin of 74 (^OL5 and ^OR74). The paper guide should be central. In page formatted style with the left margin as normal and the right margin at 60 (^OR69) and the paper guide set to the rightmost position.

William Weir, Castlehill

And finally... a tip from myself. Did you know that, quite possibly your printer has two different italic modes? The standard code for italics on is 27,52. For a change (and without any other printer codes coming after it) try 27,62. Use 27,61 to release it. Compare the two italic styles, and you could well see a difference between them.

The second style works by turning on the eighth bit of the printer port. Generally the resulting characters are the inbuilt italic set, rather than italicizing the standard font.

PbM

RU14 CPC PD?

What was that? PD software is rubbish? Look, if you're not interested in serious budget software, go to *Action Test* and *shoot* something.

PD DISK 1

£6 ● Disk
DW Software, 62 Lascelles Avenue, North Humberside HU19 2EB

David Wild's DW Software is unique in that, to the best of our knowledge, it is the only library devoted purely to the CPC: rather than all that standard CPM 80 column two colour software, David's is written especially for the Amstrad.

That's what it's all about

Take a look at this magazine. Exclude the companies who splash colour advertising across it in the hope of making sales. The home computer scene has many other faces, apart from the high profile corporate games seller. So listen in, because *AA* reaches the parts...

When people write something permanently storable, they automatically have copyright: without his/her express permission only the author can copy it.

Public Domain programs, on the other hand, have a generic, all encompassing copyright. *Anybody* can copy them, and hand out as many copies as they wish. What they cannot do is to pass off the work as their own and/or sell it.

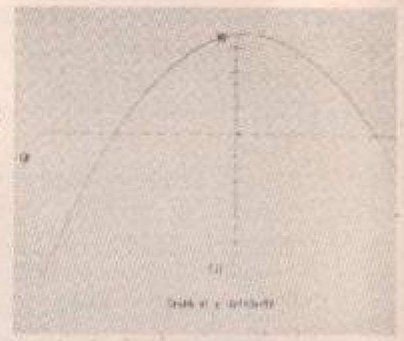
So what's the £6 for – postage? Hardly. These programs accumulate at libraries. Each library – in theory, at least – updates its own programs and makes sure that they work properly. It is this 'housekeeping' you pay for.

This sounds all very well, but surely if they're free the programs can't be up to much?

The disk contains:

- **Easydos Desktop.** A novel name to get around the various strictures surrounding the WIMP (Windows, Icons, Mouse, Pulldown menus) environment – you know, you move a little pointer to pull down menus from the top off the screen, and select icons to do various tasks.

  This sort of approach – very appealing to the eye – doesn't really work on the Amstrad. The problem is the lack of memory and general speed to produce displays and effects that are worth seeing. It can't be denied though, that this can help in the appreciation of such disk management systems. It's a good attempt at a virtually impossible target.
- **Format, Oops! (file uneraser)** and **Editor**: standard, no nonsense offerings that compete with similar commercial products.
- **Keyword,** the first of two programs for the Basic programmer. It's designed to make program entry (Type-Ins etc.) easier, and works by configuring the keyboard to print certain Basic commands when you press a CTRL key combination. So CTRL-W makes the word WINDOW appear, and CTRL-S produces SAVE. It takes a while to get used to this sort of system, but it helps with silly things like typing errors, and entry speed.



● Quadplot goes to work on a curve

- **Basic+,** the second program for Basic programmers, is a suite of RSX commands that add in various ways to the power of Locomotive Basic. They range from the fairly low key CAPSON and capsoff routines (no prizes for guessing what they do) up to some scrolling commands. Admittedly these RSX's can do nothing a *Hot Tips* follower can't do, but people want programs that they can use easily. This toolbox is a welcome addition.
- **Quadplot** plots quadratic equations (surprise surprise).
- **MGP** is a full mathematic graph plotter – more educational, even useful for those who need an equation drawn properly.

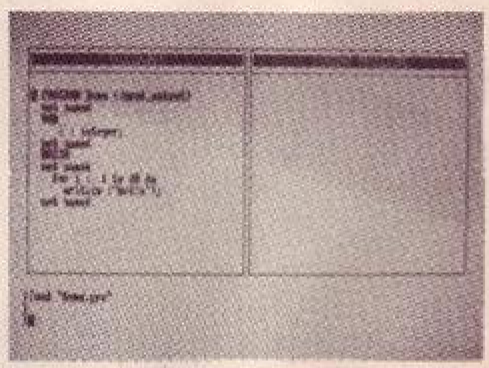


● Is your Amstrad a WIMP?

The disk also contains some odds and ends. These include ones to draw the Mandelbrot fractal and quadratic equations; another to put a real time clock on the screen, and so on. Such shorties are often considered material to pad out a disk, but these certainly wouldn't disgrace *Type-Ins*. In addition some demonstrate programming/coding techniques for the beginner to study.

Documentation is minimal, consisting of a few pages run off a printer. Many PD programs don't even bother with this much, however, relying on users to work out which button does what.

There can be little doubt that PD software is a good thing. It supplies people with cheap software, and can occasionally be of a very high standard indeed. It also gives programmers the satisfaction of seeing their creations being used and appreciated.



● PEDIT: Program Editor

This first PD disk from DW Software is definitely a cut above the average, and I hope that many more are produced. The hobbyist interest of home computers is infinitely more rewarding – both in entertainment and education – than interminable witless games.

If you run a CPC PD library we'd like to hear from you. Send a copy to PD, Amstrad Action, 4 Queen St, Bath, Avon BA1 1EJ. If you would like material returned be sure to enclose a suitable SAE, and mark the disk with your name and address.

GOOD NEWS
- A fair selection of programs...
- ... and the price is right!

BAD NEWS
- The documentation is on the limited side...
- but at least you get some!


Are You Good Enough to TACKLE
STAR BUY
HOTSHOT
There is so much in Hot Shot – you need to be a crackshot, a pinball wizard and an ace controller. Have you got what it takes to beat Hot Shot?
GOLD LABEL AWARD
HOTSHOT
Screen shots from Atari ST version.
Universally acclaimed as the greatest game this century.
Hot Shot has exceeded all expectations. out of hundreds of games only two have qualified for Addictives Gold Label award.
These are Football Manager 2 and Hot Shot.
Hot Shot is so action-packed, before you buy, read the back of the Hot Shot box. Available at all quality stores.
"A fast, addictive challenge. Original and humorous." Games Machine
"It looks frabjuous ... and well brill it looks too." Sinclair User.
No.1
Street Date: End of August.
CBM 64/128 – £9.99 cassette £12.99 disk
Spectrum – £8.99 cassette, +3 £12.99 disk
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PRISM LEISURE CORPORATION, Unit 1, Baird Road, Enfield, Middlesex EN1 1SJ.

Wait until midnight

Micronet – the CPC hobbyist's dream, or a waste of time and money? Pat McDonald has its number.

Once upon a time in the seventies the dream of a consumer telephone network became a possibility. Such a network, it was thought, would create its own society, with subscribers able to shop, socialise and even bank without getting out of their armchairs. Furthermore the system would take advantage of the new Videotex graphics system.

So was born Prestel, a system that would revolutionize the way we live, with people no longer obliged to leave their home...

You will already be aware that the reality, as it invariably does, fell far short of this futuristic dreamworld. According to the original specifications the system would behave like a telephone: simply dial a number, and the relevant page is displayed. With over 100,000 pages available, however, just running through the database was prodigiously time-consuming. The result – surprise, surprise – was that people very sensibly couldn't see the point, and continued to leave the comfort and security of their homes to venture out into supermarkets and banks.



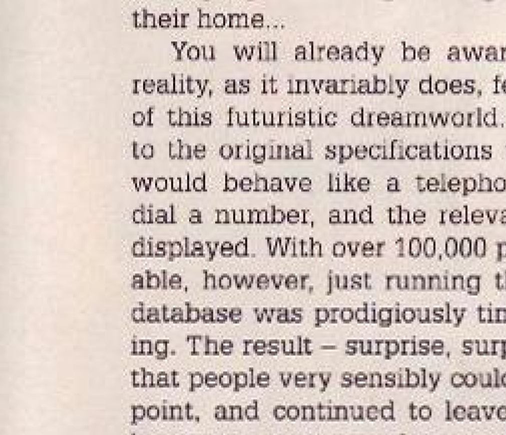
The Micronet deal... Interested? ☎ 01 278 3143 for more information

Fast forward a decade. The time: the present. The stem of the system is Prestel. Coming off it at various points are smaller, diverse areas, called information providers: Focus, Prestel's own magazine, and services such as CitiService, Farmlink, Education and Teleshopping.

But the biggest branch is Micronet, a section dedicated to microcomputer users. In other words, you and me.

Subscribers

Let's assume you already have your modem, interface and comms software. Before you hand over your hard-earned cash you very naturally wish to dial Micronet and take a look. What do you get? Well, very little, to be honest, unless you actually have a subscription. Browsers can look at the service by entering an identity of 4444444444, and a password of 4444. Real identification is sent by post after you hand over your loot.



Amster's Cage welcomes you

When you do subscribe, dial the number, enter your ID and password, and you find a rather pretty display frame, with little indication of where to go from there. So first: how to move between pages. Type an asterisk (*), a number (prefixed with 800 – Micronet begins at page 800) and a hash.

Your problem, of course, is that you don't have a directory. Fortunately you can now type a name between the hash and asterisk. Far easier to remember.

So try *CAGE#, which puts you into the *Amster's Cage*, a special interest area for Amstrad users. It's shared with those dreadful PCW and PC owners, I regret to say, but even so you should find plenty to catch your interest. There is a large daily-updated letters section, for instance, a public domain software section, a hardware area and a bulletin board. Don't expect anything as bizarre as *Gnome at Home*, though.

Another section of interest to the CPC user is the telesoftware shop. From here you can buy commercial games, often with a 15% discount. A software chart is updated regularly, and you can vote for your favourite programs too. And half the programs you don't even have to pay for.

Then there is electronic mail. Now not only can you send messages through the various areas, but you can also use a gateway to the Telecom Gold computer. This is one of the more widely known e-mail services.

The charges here can be more than Micronet, with VAT on top. A mailbox costs at least 20p, with each extra K (Kilobyte = about

How much?

Micronet costs £20 a quarter, but if you pay a year in advance – £79.95 – you get a free modem. Ok, so it's a standard manual device that can't handle 300/300 communications – but it draws its power from the line, rather than a mains socket. It's a good freebie.

For an extra £62 (all prices include VAT and postage, by the way) you receive the Spectre Interface and the *Cage* Comms ROM software, a mini review of which appears below.

Online charges – which have just gone up, so they shouldn't rise again for a while – are 7p a minute peak time (8am-6pm), 1p per minute off peak (6pm-12 midnight) and free between midnight and 8am. This latest price rise created quite a rumpus, with letters of complaint appearing in all kinds of places. In fairness to Micronet, however, it must be said they had not previously raised the price for 3 years and it was a cheap service compared, for example, to Microlink.

In addition to these prices you must take into account the cost of your call. There is a national number – 01 623 8855 – but in order to keep the price down local numbers are also available.

Smart offer

For £138 Micronet will sell you a *ProPak*. This interesting black box (well, cream actually) boasts an impressive specification.

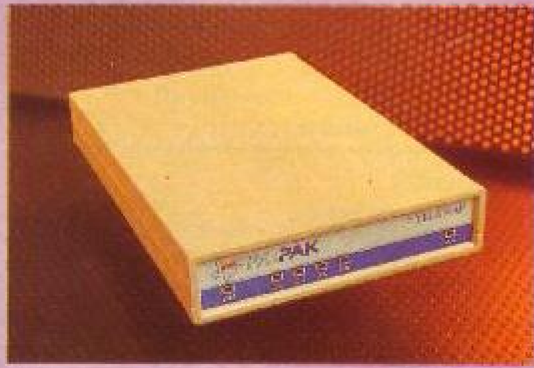
And at £236.40 there's a special offer comprising the *ProPak*, Spectre comms interface, the *Cage* comms ROM and a year's subscription to Micronet.

The menu-driven software (full review in *AA30*), developed courtesy of the *Amster's Cage*, has features such as a built-in editor, printer dump and software downloader. Learning to use it is a lot more fun than most, and it's one of the best comms packs I have had the pleasure of experiencing.

The modem has a high specification for the price. It's smart – in other words it's Hayes code compatible and features autodial, auto-answer and baud rate detect. It has no manual buttons, relying totally on the automatic abilities, and there's a monitor speaker and redial option included. One grumble: a power supply built into an oversized mains plug. Try getting *that* into an adaptor!

Finally a word of warning about the Spectre comms interface, which lacks a through connector for the 464 disk drive.

The package isn't perfect, but it's the best complete kit around, bearing in mind that it is Viewdata only without additional software.

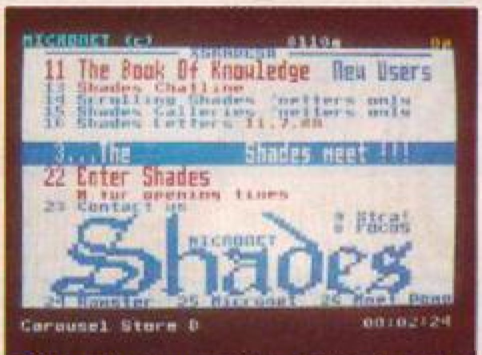


1,000 characters) costing an additional 10p. Of course more people can be reached than most e-mail services, and radio paging is also catered for.

News services, weather reports and other features are also available, together with information on many small countries, towns and cities. Such information is hardly Micronet dependent, but it's useful to know where to find it.

Fun and games

If all this serious stuff has left you with the impression that comms is short on laughs – well, with all that expensive equipment and those phone bills, wouldn't you be glum? – you may be interested to learn of Micronet's entertainment sections, located in *Xtra*. There's plenty to keep you occupied while the bill ticks up... and up...



● Wonderful game this. Lots of crinkly edges

Shades, an interactive game, was the subject of a health warning in last month's *Amscene*. Two players got so involved they fell in love, would you believe, and ended up married. Anyway, as I was saying, *Shades* is set in a traditional fantasy/adventure land, with the usual quota of magic and atmosphere. Trying to play



● The Mafia hit squad – *Shades'* bully boys

with 139 other lunatics is interesting, to put it mildly, not least because the favoured method of scoring is to kill other players. Less destructive players can band together, rather than working everything out individually. But watch out for the love bug!

Starnet, by contrast, is a logical game in which you are pitted against other players in a galactic empire of the future, with a few ships to help you defeat the emperor. Do this and future moves are free. *Starnet* seems to take longer to register on than *Shades*, but then play has to be concurrent, with everybody moving on the same day. Again, imperial 'political' groups try to get 'their' person in.

Games such as the two mentioned here are constantly being improved and updated. For those with a less ambitious taste, *20th Century Hamster* provides a compendium of widely-ranging activities, many of which are excellent.



● Buying software the easy way

And then there's *Slasher*, a vicious gossip and muck rakers' page that really is – well, witty. I love it, but then I'm not noted for my sophistication and genteel character. *(You can say that again – ed.)*

HRH Hackers

Early in 1984, a rarely used Prestel computer became a target for hackers. Two of them – computer journalists Stephen Gold and Robert Schrifreen – were convicted of forgery as a result of the incident, which included the use of HRH Prince Philip's mailbox.

Since then the Court of Appeal and the House of Lords have ruled that forgery in this case does not apply.

So the two merry hacks have had some free publicity, and Prestel has been allocating resources to protection at a furious rate – arguably what they should have done in the first place.

Another recent piece of news has been the price increases. The prices here are the current ones – they used to be 1p per minute peak rate, and free the rest of the time. Various sections of the media (to say nothing of the public) have hammered Prestel for daring to even contemplate such a move, let alone implement it.

Micronet's public relations officer Helen Batchelor stated that there had been no increase 'over the past three years', and that 'to retain our position we had to increase our tariffs'.

Is it worth it?

Micronet is likely to continue to grow as more home computers come onto the market. So the facilities will inevitably be upgraded, eventually encompassing on-line arcade games and simulations. For anyone but a comms nut the whole thing may be an expensive frippery: the daytime prices (and don't forget the call costs too) quite simply cannot be justified for the average user.

On the other hand this is the biggest entertainment bulletin board you'll ever log onto. The offers are worth checking out, especially the *ProPak*, and the comms enthusiast will be attracted.

After all, logging onto Micronet need not be expensive, if you can just stay awake until midnight when the service is free...

HOT TIPS

Superb soft/hardware tricks and tactics

The *AA* guide to shortening programs

Program compression is something I've found myself doing quite a lot lately, having written 38K Basic programs which seem to enjoy throwing out **Memory Full** on a regular basis.

Here's a step by step guide to data compression:

- Use a bootstrap (loader program) which sets up functions never changed throughout the main program's operation – things like setting **HIMEM**, for example, extra characters and the correct **SPEED-WRITE**.

The relevant commands can then be removed from the main program saving valuable memory.

- If extra characters are never used in your program place the command **SYMBOL AFTER 256** in your bootstrap. This reclaims memory.
- Concatenate program lines when possible. By efficient execution of this process, the number of lines can be reduced. Because many line numbers no longer have to be stored this saves memory.

Take care to ensure that you don't place one line onto the end of an **IF-THEN** statement. Don't remove vital lines (e.g. the beginning of a subroutine). There's no foolproof guide here except that a subroutine always ends with **RETURN**. Often another one follows after it.

- Delete all **REM** statements. (Including lines which begin ').
- Place the instruction **CLEAR** in your program at points where previously established variables no longer matter. For example, after drawing a title screen. **CLEAR** kills all variables: to keep one **POKE** its value into memory, use the command and then **PEEK** it out again.
- Keep the number of different variables to a minimum.

If a variable can be forgotten after serving its purpose (eq **FOR 1=1 to 5000** to pause) then re-use it in similar circumstances later.

- Place frequently repeated lines in subroutines.
- Place the instruction **anyoldvariable=FRE(0)** in the main body of your program. This forces a garbage collection preventing unnecessary garbage build up.
- **RENUM 1,1,1** to mimimise the length of your program.

Monitor your progress by typing:

```
PRINT FRE(0);" Bytes Free"
```

in direct command mode.

Sean McManus, Stevenage

We welcome your contributions to *Hot Tips*, and the best published each month earn their author £20. So what are you waiting for?

Address your work to: *Hot Tips*, *Amstrad Action*, 4 Queen St, Bath, Avon, BA1 1EJ.

The great bank heist

I have devised a routine to transfer all of the normal bank 0 memory in 16K banks into the upper 64K of my 6128. The result is three 16K files on disk covering memory from 0 to &C000, which can be investigated at leisure.The idea is to switch into the &4000-&8000 slot, a 16K block from the upper 64K. Next transfer 16K of code into it, then switch it back out again. By resetting the computer control is regained, but the code in the upper 64K is retained. A simple out command switches the code back into the lower 64K where it can be saved in the normal way.

Typical situation – program-running, jumpblocks erased, no way to access RAM other than by Multiface.

Intent – To save &4000-&8000 to disk.

Solution – Press the red button on the Multiface and using the toolkit poke the following into &8000 onwards: **F3,01,C5,7F,ED,49,21,00,00,11,00,40,01,00,40,ED,B0,01,C0.7F,ED,49,18,FE**

This is same as the following assembler:–

```
    DI                  Disable Interrupts
    LD BC,&7FC5         Swap bank 5 with bank 1
    OUT (C),C
    LD HL,&0000
    LD DE,&4000         Move 0-&4000 up to
    LD BC,&4000         &4000-&8000
    LDIR
    LD BC,&7FC0         Swap banks back to normal
    OUT (C),C
WAIT:JP WAIT            Endless loop to serve as a
                        break
```

Next set up the Multiface locations &2000-&2003 for a jump to the code you have just **POKE**d into &8000, ie 00,80,0C,C0. Press ESC and press J. If all has gone well the prog will not be running but circulating at &8016 as a check of the stack will show.

Press the red button again. Next the machine has to be crashed to reset it. This can usually be acheived by setting up &2000-&2003 to 00,00,89,C0. You should have a machine looking as if switched on: you can't see your block of code in the upper 64K To get this into normal RAM type in Direct Mode:

```
OUT &7F00, &C5. SAVE "BLOCK1",b,&4000, &4000
```

This gets your block onto disk. Remember that this block has originally come from **&0000-&4000**. A similar method may be used for the other two blocks but you must poke your code well out of the areas that you are moving about and never in the &4000-&8000 block.The code to retrieve the &8000-&C000 block is as follows, and can be POKEd into say &3000.Don't forget to press "*" to access normally and not the Multiface RAM.:

F3,01,C5,7F,ED,49,21,00,80,11,00,40,01,00,40,ED,B0,01,C0,7F,ED,49,18,FE.

Use the same method after running this – reset the computer, do a **OUT &7F00, &c5** and save to disk.The bank **&4000** to **&8000** requires a slightly different approach as this is the bank that is swapped around. The code is moved up 16K, then swap the banks, and finally move the code down again. Use the following code which can be located at &3000.

F3,21,00,40,11,00,80,01,00,40,ED,B0,01,C5,7F,ED,49,21,00,80,11,00,40,01,00,40,ED,B0,01,C0.7F,ED,49,18,FE

Once again, OUT &7F00, &C5 after a reset will bring the block into range for a normal binary save. If the crash does not work then random jumps to odd places usually do the trick eventually.

CL Naylar, Penparc

PROBLEM ATTIC

You ask 'em, he answers 'em. No problem!

Tough lesson

I recently typed in a game from a listing and saved it to tape.

However when I tried to load it back in, it started to load `Block 1` and then came up with a `read error b` message. Reading the manual I found it said to rewind the tape and try again. I tried this and it still didn't work. Can you solve this problem without my having to type it all out again?

Andrew Helsby, Emsworth

I regret to say, Andrew, that, because your own cassette deck cannot load it, the tape itself must be up the creek.

So you will have to type it in again. In future though, make multiple copies of everything you type, preferably every half hour or so. The actual time you spend working and saving is your responsibility – how much are you prepared to lose due to tape problems?

How? Where? How?

I would like to buy a Dk'tronics 64K RAM expansion for my Amstrad CPC464. Please could you tell me how to order it through the post.

Ian Dowse, Dunlaoghaire

Dk'tronics products were bought by RAM Electronics. Their address:

Units 8/15/16 Redfields Industrial Park, Redfield Lane, Church Crookham, Hamps GU14 0RE England. ☎ 0252 850085. ***Cost: £49.95.***

You may find it cheaper to buy the product through a retailer like Arnor or Comsoft – check the adverts in recent issues.

Music while you play

I am programming a game in Basic at the moment and I would like to know how to load in *Advanced Music System* files and play them without having to load the main program in, so that while the game is running I can listen to the tune.

This must be possible since if you wanted to play the Blue Danube while you are playing a game, all you have to do is put *Elite* in the disk drive, and type:

```
OPENOUT "D":MEMORY &5FFF:CLOSE-OUT:LOAD "MUSICEX":CALL &6000
```

Nicholas Irving, Headley

Unfortunately no-one has yet written an interrupt driven sound processor that works with the AMS. Several Type-Ins *can play such, but not under interrupt – that is, while the Amstrad is doing something else.*

Keep an eye out for future submissions though. It is as you say perfectly possible – to a machine code programmer with time to spare. Any volunteers?

Colour blind

In 1984 I purchased a 464 with colour monitor. I have recently been having problems. Various colours show up too dark, or black, like dark blue, brown and green. This can ruin many games, such as *World Class Leaderboard*. Please can you suggest the fault, and how much it will cost to repair and where.

Paul Rushton, Middleton

The CPC's colour system is based around a three colour, three brightness scale. The colours are red, green and blue: the brightness levels are off, normal and full. A diagram might help:

	RED	GREEN	BLUE
OFF	X	X	X
NORMAL	X	X	X
FULL	X	X	X

From this you might work out why the Amstrad's total number of colours is 27. (Three to the power of three).

It seems likely, from other letters, that a defective signal is quite a common problem. The only likely mechanical fault is that your monitor lead has a bent pin or something similar. If so it shouldn't cost a lot to repair.

On the other hand monitors and computers do break down. In either instance, talk to Analytical Engineering Ltd,☎ 0702 618455. You send them your broken equipment, and they give you (eventually) a quote on how much it's going to cost to repair.

They're not cheap – minimum charge £10 plus parts. But for a big repair job they're good. (They don't repair disk drives though: they replace them.)

VIEWED FROM REAR



PIN 1	RED	PIN 4	SYNC
PIN 2	GREEN	PIN 5	GND
PIN 3	BLUE	PIN 6	LUM

● The CPC monitor connections

Talk to your local electrical repair person. If it's a simple lead job, they should be able to work out the wiring from the manual. For those who don't have a manual, here's a diagram. For a knackered monitor try the firm above.

Amstrad overload

Why can't manufacturers of plugs and adaptors make larger expansions? I use a four way expansion unit (4 devices into one wall socket.) I have 7 different items to use, but I can't run them all at once. 'The new eight way expansion for £1.99', that would be ideal – if such a thing existed. Or can I plug one four way adaptor into another 4 way adaptor? Would it explode?

How do I get a black background mode 2 screen on switch on, rather than a blue mode 1 screen?

Ali Q, Woking

You'd be lucky to get a two way adaptor

Quadrophenia

My uncle recently bought a new stereo system for his car, and had four speakers left over from the previous system. Is there any way I could connect these speakers up to my CPC6128?

Jeremy Bowden, Loughborough

You could connect them directly, replacing the Amstrad's present speaker, but this really wouldn't improve matters much. What is needed is an amplifier to connect to the stereo socket, and drive the speakers properly. We haven't yet...

Stop Press... Hold the Problem Attic pages... We have just received such a Hardware Project, and it will go into the next issue. It's only going to be a stereo system, however: quadrophonic hi-fi is a bit out of our league.

RAM, ROM and a coffee shortage

Recently I bought a disk drive for my CPC464, resulting in my coffee intake going down due to decreased loading times. The snag is that I have so much tape-based software at present, and though I can transfer them to disk, I am not sure which is the best route. Claims are made for the *Multiface 2+* unit, and they seem reasonable, but so do the claims for the Siren disk producers. Does this mean I have to buy both?

I like the idea of turning my 464 into a 6128, re your article in *AA30*. I don't like the idea of an external RAM pack. Once upon a time, you reviewed an internal RAM pack from Vortex, and a 6128 version was promised. What happened? Are they still in business? Would this be an easier way to upgrade? Finally, which is the best ROM board?

Brian Privett
London

I assume for your first point that you are talking about the Siren tape-to-disk software Discovery Plus. *This is all very well, but such copiers become outdated very quickly as protection systems get even more sophisticated. The* Multiface 2+ *is more expensive. On the other hand it will backup more games. The other difference between them is that Siren's product removes protection, whereas Romantic Robot's re-encodes the programs that it backs up. So I'll recommend the* Multiface *every time.*

You seem a bit confused about memory expansions. The AA30 upgrade article talked about the Dk'tronics memory expansion. The Vortex (who are a German company, and still healthy according to latest reports) was incompatible with the Dk'tronics, and very little software was written for it. If you want a 6128, then for the moment you're stuck with an external RAM pack.

Best ROM board is Rombo's, at £34.95. ☎ 0506 39046.

for £1.99, let alone an eight way. Now, I can't **promise** *that it will explode – but overloading mains cables is dangerous because it can increase the working temperature of the cable beyond its safety level, gradually causing the insulation to deteriorate. Result: fire.*

Not wise if you had a next birthday in mind.

The one and only safe – and unfortunately expensive – way to get more mains cables is to have an electrician run in extra cables.

On to your second question: to change the start up colours and set up, you would have to use an external ROM on initialization. If you're heavily into machine code this won't be too tricky, but otherwise forget it. Don't forget the cost of the ROM board either.

A ROM blower is available from **John Morrison at £39.95. ☎ 0532 537 507**

Quest for the 8 bit printer port

I would like to know if the expansion port pins (D0 – D7) are connected to the printer port pins (D0 – D6), D7 being the eighth bit. If they are, would it be possible to build an 8 bit printer port?

Secondly, why don't you print pokes for use with the *Multiface*?

Christopher Gray, Ivybridge

Eight bit printer ports are not wired directly to the expansion port pins – they are put through IO selection and buffer devices first.

That's why the KDS one (featured in Buyers Guide *this month) costs £19.95: it's not simply a matter of a few bits of wire.*

Secondly: yes, we will print Multiface *pokes, if we get ones good enough. Not too many at a time though – we aim to please as many of the people as much of the time as possible.*

Clean heads, bad news

I own an Amstrad CPC6128 and the disk drive doesn't work. I put in a disk, type `RUN "filename` and it starts those familiar loading sounds.

Then you can hear the disk clicking. I think the disk drive head needs cleaning, but I'm not sure. What do you think?

How about an address for a head cleaner?

Stephen Godrich, Morriston

The three inch drives are very reliable, partly because the disks are encased in a sleeve and partly because of the dust excluder. And when they do get dirty the heads clean themselves, so it is likely that your disk drive is seriously ill, I'm afraid. I suggest you contact Analytical Engineering (mentioned above) and steel yourself for some bad news.

If you insist, **Micro Interface** *(☎* **01 340 0310***) do a disk cleaner for £5.99.*

Easy one

What is the best art package for the CPC464, on tape at a low price?

M Barge, Emsworth

The best art package for the 464 was Melbourne Draw. *The rights to publish it were bought by Mastertronic, the budget software people. So a budget art package should be on the horizon.*

Merging the *AA* way

If I have two separate programs, and I renumber one to fit in a space in the other, could I merge them together?

Not just a, 'Yes', I want you tell me how to do it!

A J MacDonald, Headingley

The way to merge two programs together is to load one, and then type for the other:–`MERGE "filename` *rather than* `LOAD "filename`.

They should then both be in memory, added together, so you can save them as one program. Of course, there must be enough space for them both.

As if we'd ever just say, 'Yes!'

Questions, questions

When I load some games from tape on my 6128 I sometimes get `Read error A` or `Read error B`. What do these mean? Is there a device on the market to improve loading from tape for the 6128?

Is there a relative data storage program that I can use to help write a database? Is there a five and a quarter inch disk drive available for the 6128? Why are three inch disks so expensive? What is Public Domain software?

Alan D T Lifeson, Moston

`Read errors B` *and* `C` *indicate that your machine is having checksum and timeout errors with a tape. It's a common problem on the 664/6128 but as yet we've not yet heard of a device that helps to any extent. If there's a solution we'd like to hear about it – so we can share it with everyone else.*

Minerva Systems (☎ 0392 37756) supply a product called the Random Access filing system but this does not perform work in memory, it uses the disk drive. KDS Electronics (☎ 04853 2076) supplies a five and a quarter second drive. This behaves almost as a standard drive, with the exception that it grabs a little more memory than usual. It has a capacity of 800K and works under Amsdos, CPM and CPM+. Price is £139.95+£4 p&p. (ROM software for it costs £19.95).

For the prices of disks complain to the importers (Amsoft); and for Public Domain *see page 14.*

Stuck?

If you're at the end of your tether, let Pat McDonald assist. And if you've discovered a neat trick, share it through these pages. Write to *Problem Attic, Amstrad Action,* 4 Queen St, Bath, BA1 1EJ.

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FIRST BYTES

Richard Monteiro's machine code tutorial

Feel any different after last month's brief stab at assembler? More to the point, how did you get on with the problems left you? Which of the following bits of assembler, we wanted to know, are acceptable, and why?

```
LD A,34      LD D,267       LD S,23
LD BC,2523   LD DE,76553    LD HL,7
```

Now you may recall that all Z80 registers are eight-bit (that is, they can hold any eight-bit binary number - any value between 0 and 255) and some can pair together to form 16-bit registers (these can store any number between 0 and 65535). Applying these facts to the examples printed above, it shouldn't be hard to work out which are possible and which aren't.

The first, LD A,34, is feasible; the A register exists and the number following it is between the 0-to-255 limit. The second and third examples are impossible: LD D,267 because an 8-bit register can't store values above 255 and LD S,23 because there is no S register. LD BC,2523 is acceptable as register pairs can hold any number between 0 and 65535 - 2523 lies in this range. The next example isn't allowed as 76553 is greater than 65535. The last, LD HL,7, is fine.

Assembler assessment

Unlike Basic, assembler can't be typed in at the Ready prompt. Well, it can, but the machine regurgitates it and brings up the nauseous Syntax error *(that's enough sick puns – ed)*. What you need, if you wish to sample the delights of assembly programming, is an assembler. Several are available.

Maxam is arguably the friendliest and most popular of the various packages around. Arnor (0733 239011) are the people to contact. Maxam - the original assembler/monitor/editor for developing machine code programs – comes on cassette (£19.95), disk (£26.95) and ROM (£39.95) formats. *Maxam 1.5* is the ROM-only version that requires Protext to work correctly. Price: £29.95. *Maxam II*, £49.95, is the CPM Plus version.

Pyradev (sold under Gremlin's Discovery label) or *Pyradev Plus* (available direct from Pyramid, 7 Belmont Park Ave, PO Box 765, Maidenhead, Berks, SL6 6YS for £19.50) are equally good, and have better debugging facilities. The plus version is designed for operation under CPM Plus.



Hold it right there! Why fork out £20 or more for a piece of software just to follow this article? It's ludicrous. Don't do it. Not until you're more experienced at assembler anyway. Pat has promised, haven't you Pat, to put an assembler on the next cover cassette. (And *First Bytes* can reveal exclusively that the next cassette is coming to *AA* very soon indeed!)

Peek and poke

These lewd-sounding Basic commands place values in, and retrieve values from, memory. Machine code programs exist by performing these simple functions. Only the A register and register pairs can be used to inspect/alter memory:

```
LD A,(87)     LD A,(65431)
LD BC,(23)    LD HL,(9879)
```

The first instruction translates to load the A register with the contents of memory location 87, place the number at memory location 87 in the A register or even peek location 87 and plonk whatever's there in the A register. Use the translation you find easiest to remember.

Note that the value in brackets can be any number from 0 to 65535 (the entire 64k memory range). The number plonked in the A register will be 8-bit: 0 to 255. The double register peek works in a similar way. Take, for instance, LD BC,(23): the B register will contain the value held in memory location 23 while C will hold the value in location 24.

The assembler equivalent to poking is simply a re-arrangement of the symbols making up the peek statement. For instance, turning the examples above on their head:

```
LD (87),A     LD (65431),A
LD (23),BC    LD (9879),HL
```

LD (87),A now means load memory location 87 with the contents of the A register, place the contents of the A register in memory location 87 or even poke location 87 with whatever's in the A register. Similarly for the paired-register example, LD (23),BC, location 23 is filled with the contents of B while location 24 is treated to C's contents.

Next month: assembler programming

Hackers only

– a section for the experienced programmer

How about a change from sensible things? You've seen those flashing borders that appear when cassette games load. Why not try making your own?

You have to change colours quickly – faster than the brain can cope with. Doing this through the firmware is a waste of time: it's too slow. One of the gate array's tasks is to look after colour switching. The port that accesses this wonder-chip is &7F00. First send one information byte to the port, that is, which ink pot you wish to modify. Then send the new colour byte – easy really.

For instance, the short routine below prints various characters in different inks and then starts flashing them. Useless, but pretty. Entry conditions: none. Exit conditions: AF, BC, DE, HL corrupt. Length: 61 bytes. Code type: relocatable.

```
  call &bc0e
  ld bc,500
loop5
  push bc
  ld a,r
  and 31
  sub 15
  call &bb90
  ld a,r
  call &bb5d
  pop bc
  dec bc
  ld a,b
  or c
  jr nz,loop5
  ld bc,&1100
loop2
  push bc
  ld bc,&7f00
  ld de,&FFFF
loop1
  ld a,(store)
  out (c),a
  ld a,r
  out (c),a
  dec de
  ld a,d
  or e
  jr nz,loop1
  pop bc
  inc c
  ld a,c
  ld (store),a
  djnz loop2
  ret
store
  db 0
```

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BAR CPM

First Steps – part one, with Richard Monteiro

If it wasn't for the fact that you have to type `RUN"filename"` to load a program, you might never know that Amsdos (the CPC's disk operating system) existed. The same is true for CPM. But this disk operating system (for that is what it is) can seem far more daunting and obscure. The reasons are several: it must be loaded from disk (Amsdos is present from the moment you switch on the micro), the Amstrad User Instructions skip by the subject very quickly, the commands aren't as obvious as Locomotive BASIC's friendly syntax and the messages that appear when you do something wrong are often less than informative.

It is said that we use less than 10% of our brain's potential: similarly the Amstrad's power is often underused and overlooked. Why not understand your micro's ability just that bit more? Why not have a go at learning to use CPM? It's not that hard, and you will benefit by being able to use the system on hundreds of other computers (and MS-DOS - the PC operating system - resembles CPM closely even if IBM won't admit it).

First steps

If you read our potted history last issue you should now have a vague idea of what it is for. But what good is its history if it doesn't teach you how to use the system? None. In the months to come *Bar CPM* is to include details on using the operating system for the first time, getting the most from the various programs lying idle on the system disks and how best to use CPM commands.

Two versions of CPM exist for the CPC: CPM 2.2 and CPM Plus (also called CPM 3.1). Version 2.2 is supplied with the 464 disk drive and 664 computer. Unsurprisingly CPM 3.1 is the more recent of the two; it was designed for Z80 machines with minimum memory configurations of 128k – into which category falls the 6128.

While the core commands are shared by both systems, CPM Plus has extensions and additions. The differences will be detailed when encountered.

Eager to get going? Right, enough waffle let's get on with it *(at last - ed)*. Insert your CPM 2.2 (or CPM Plus) system disk into drive A and type `|CPM` (the | symbol shares a key with the @ sign, to the right of P) followed by a stab of the return key. After a few seconds of disk whirring you are presented with either 'CPM 2.2' or 'CPM 3.1' depending on which system you have. Get used to the 80-column display featuring the famous `A>` prompt; you'll be seeing a lot more of it.

At the `A>` prompt you can type characters (the same is true at BASIC's square cursor); CPM won't process these keyboard tinkerings until the Return (enter) key is press or certain Control-plus-key sequences are hit. You can't enter any old nonsense though: type 4LKHJ and press Return. After some disk activity the system will reply with 4LKHJ? – its way of saying it doesn't understand what you entered (friendly, huh?). A limited set of commands exist. For instance, type `DIR` – short for DIRectory – and press Return. Assuming you have a disk in the drive you will get a catalogue of the disk's contents.

Where to go...

...for public domain software:

- **Advantage** ☎ 0242 224340
  56 Bath Rd, Cheltenham, GL53 7HJ
- **CPM User Group**
  72 Mill Road, Hawley, Dartford, Kent, DA2 7RZ
- **PD Software** ☎ 08926 63298
  Winscombe House, Beacon Road, Crowborough, East Sussex, TN6 1UL
- **Triple Zero Services**
  23 Broad Lane, Essington, Nr Wolverhampton, Staffordshire, WV11 2RG
- **PD-SIG**
  90 Braybourne Close, Uxbridge, Middlesex, UB8 1UJ

Do remember to enclose a SAE when enquiring.

User clubs are also a good place for getting public domain. **WACCI** (01 898 1090) in particular have a selection of disks crammed with stuff. Well worth checking.

To enrole as an **UAUG** member send **£5** to **1 Magnolia Close, Fareham, Hants, PO14 1PX.** For this you get a bi-monthly magazine and access to 2 megabytes of PD software. Enquiries on **0329 281324.**

Dial dir for directory

You've learnt that the contents of disks can be viewed by issuing the command `DIR` from CPM. This innocent looking command, however, is capable of much more.

For example, files of a particular genre can be viewed:

`DIR *.COM [Return]`

(Note: anything between square brackets is an instruction to you, not an instruction to the computer. So the above means type `DIR *.COM` and press the Return key.) CPM obediently lists all disk files with the extension `COM`. The * is a *wildcard* character which CPM takes to mean any sequence of characters of any length.

The question mark (?) is another wildcard character used by CPM. It takes the place of any symbol. Thus:

`DIR BARCPM.3?`

will list all files with name `BARCPM`, and extension 3 followed by any character.

You could type `DIR ????????.???` or `DIR *.*` or any combination of the two, but that would be pointless as you'd be asking the machine to list all the files on the disk - something `DIR` is quite capable of doing on its own.

That's it for this month. Next issue we shall explain CPM 3.1's extended `DIR` command and the various other CPM commands accessable from the `A>` prompt.

WIN WIN WIN

Send us your CPM tips and we could make it worth your while: the best earn their authors a voucher worth **£15!** (redeemable against any of the super offers in our mail order section at the back of the current issue of *AA*). They can be on anything and everything CPM-related; commands, programs on the system disk or other interesting facts. Stop dawdling! Put pen to paper! Get your facts to us fast! The address is *Richard Monteiro's Bar CPM*, 4 Queen Street, Bath, BA1 1EJ.

ABSOLUTE BEGINNERS

Master Basic the gentle way

OK, how was it for you last time? The last change in the last issue (which the more astute will realise should have been **FOR a=2 TO 5** as opposed to **FOR a-2 TO 5**!) should have looped four times.

Right, onto the main business of the day – the correct printing of the value of a variable.

You see, that **a** between **FOR** and = in line **20** is a variable name. The **FOR** command needs a variable to count the number of times it's gone through the loop, and the **FOR a=** tells the Amstrad to use **a** as that variable. Modify your program so it looks like this:

```
10 CLS
20 FOR a= 2 TO 5
30 PRINT a
40 NEXT a
```

When you **RUN** this you get a series of numbers running from 2 to 5. Each of the numbers is the value of the variable **a** for one pass through the loop – one performance of the **PRINT** command in line **30**. As you can see, the value of **a** starts off as 2, and goes up by one each time until it gets to 5. When your CPC finds the command **FOR a =** it sets **a** equal to the first number, runs through the loop, increases the value of **a** by one, runs through the loop again and so on. It'll only stop once **a** is larger than the second number.

In this program, then, the machine sets **a** equal to 2 first time though. The **NEXT** command tells it to run through the loop again using the **NEXT** value of **a** – which it gets by adding one to its current value. Thus it runs through the loop again, this time with **a** equal to 3. The same thing happens when **a** is equal to 4 and 5.

After the pass through the loop with **a** set to 5, the **NEXT** tells the machine to find the **NEXT** value of **a** again, ready for another pass through the loop. The **NEXT** value of **a** would be 6, however, and this is greater than the second number in the **FOR** command.

So instead of running through the loop again the computer carries on with the rest of the program. In this case there isn't any more program to carry on with so the CPC puts up **Ready** to let you know it has finished.

We can show what goes on even more clearly by adding these lines to the program, and running it again:

```
50 PRINT "That's the end of the loop"
60 PRINT a
```

You should now find that it **PRINTs** out the numbers 2 to 5, the end-of-loop message and then the number 6. This last is the value of **a** after you machine has finished with the loop. As we said before, this means it carries on with the rest of the program. So when it reaches **PRINT a** command in line **60**, **a** still has the value 6 from the last line the CPC performed – the **NEXT** in line **40** – so that's the number that it **PRINTs** on the screen.

A further example

Remember that program, a few months ago now, that dragged a square from one side of the screen, very slowly? It went as follows:

```
5 FOR a=0 TO 599
10 CLS:MOVE a, 180
20 DRAW a+40,180,1
30 DRAW a+40,220,1
40 DRAW a,220,1
50 DRAW a,180,1
60 NEXT a
```

You should have some idea of how this works now. We haven't covered that **a+ 40** business in lines **20** and **30**, but this is more or less self-explanatory. It just tells the CPC to use 40 more than the value of **a** for the first number of the **DRAW** command.

Step to it

One more thing I want to cover this month is the **STEP** command. Modify line **5** of the program above to read:

```
5 FOR a = 0 TO 599 STEP 10
```

Notice how much faster the square moves now? That's because the Amstrad is increasing **a** by **10** every time it goes through the loop, instead of the usual 1. That's what the **STEP** does for you – it tells the computer by how much the loop's **NEXT** command should increase **a**.

A quick summary

The commands **FOR** and **NEXT** work together to form loops. Your machine will perform the program command in between the **FOR** and the **NEXT** repeatedly.

The **FOR** command needs a variable name and two operands. (What? Operands is just a posh way of saying the values or numbers after a command.) These are laid out in the form **FOR variable = TO**. When the computer comes across the **FOR** command he makes the variable equal to the first operand. The variable is used to control the number of times the CPC performs the loop. Because of this it is called the loop variable. The second operand is in upper limit for the loop variable, and your computer dutifully stores it away for future reference.

The **NEXT** command just needs a variable name but it must be the same one you used in the **FOR** statement. When the Amstrad reaches the **NEXT** command it adds 1 to the loop variable, and compares it to the upper limit – the second value of the **FOR** command in other words. If the loop variable is still less than the upper limit, he runs through the loop again; otherwise , he carries on with the rest of the program.

If you are using the loop variable as a value of a command in the loop, like the way the moving square program uses **a** in those **MOVE** and **DRAW** commands, the **STEP** command can come in handy. This lets you change the step size of the loop - that is, the amount by which the **NEXT** command increases the loop variable each time. The machine will assume you only want to add one each time, unless you use **STEP** to tell it otherwise. Using **STEP**, the **FOR** command takes the form **FOR variable = x TO y STEP z**.

Part of one end

We've now come quite a long way. You should now know how to write simple programs to put text and graphics on the screen, and how to save yourself effort by making the CPC perform bits of your program repeatedly. Well done for getting this far!

You'll also have had a first look at what variables are, and what they can do for your programs. We'll be taking this a bit further. If things seem to get a bit complicated, bear in mind that variables are just letters or words used to stand in for numbers. Okay?

Next month we continue with the numbers game.

Whizzkids!

The Darling brothers and the Oliver twins are all disgustingly young and sickeningly successful. Old Steve Carey went to Code Masters HQ to try and discover their secret.

AA: How did Code Masters start? How did you become involved in computers?

David Darling: The Darlings came over from Canada when Richard and I were in our early teens. We got a Vic 20 for Christmas and used it to program in our spare time. We also *made* extra spare time by avoiding certain things – school, for instance! We were always very interested in electronics, and computers seemed the ideal way to continue that without getting our fingers burnt on soldering irons...

Richard Darling: We had a big competition to see who could make the computer do the cleverest things and then we just progressed until we were using machine code and assemblers. Then we had enough games written to sell we set up a little company called Galactic Software and put adverts in *Popular Computing Weekly*... By that stage, there were sections in machine code but with the main structure still in Basic. We did a game called *The Games Designer*, which was the first thing we got into Boots – that was a big achievement at the time...

Next we exhibited at a show in 1984 at the Novotel near Hammersmith, and David and I were approached by Mastertronic and Commodore and Mirrorsoft and commissioned to write games for them as freelance writers. So Galactic Software gradually dropped away and David and I moved up to London to live in the apartment above the Mastertronic offices.

It was at this stage our father, who has been self-employed most of his life, decided he'd like to get involved. He knew a lot about running a business and so on, and David and I knew about about writing software, so we thought it would make a good combination for us to make our own company rather than just writing as freelance authors.



● Richard and David Darling



● Code Masters HQ

Then we launched – or rather, we *planned* to launch at PCW in 1986, but we missed by two or three weeks. And on our way to the show we crashed the car. Well, actually, the lady in front decided to stop in the middle lane of a three lane road...

> *"The high-price guys like making cassettes for whatever it costs, 26p each, and selling it for £9.95 to the kids. There's a lot of very fat cats out there, and that's bad news. We're just undercutting them completely. It's fair, it's what capitalist society is all about."*
>
> **– Mike Clark**

RD: Anyway, when we eventually got to the show we found some programmers, the Olivers and quite a few others. We have them all on computer, a list of the best ones and we commission them for various projects. Some of them come up with original projects, though that doesn't happen very often...

AA: – all registered under the Data Protection Act, of course –

RD: Did I say computer? I mean, on *index cards*. No personal information at all. Erm...

> *"Our age is definitely an advantage, because people underestimate us. That means you can get into a winning business position and take them by surprise.*
>
> *It's all a big game, and it's nice to win."*
>
> **– David Darling**

AA: So how many people do you have working with Code Masters?

RD: Well, altogether there's about 200 graphic artists, musicians and programmers – but obviously they're not all working for us full-time! They're people we've kept the details of and pick the best ones and use them for whatever we're working on.

MC: Actually working for us at the moment, it's hard to guess. In volume terms we've have nearly 50% of what we've got already in development, and we've got a huge series of launches coming on towards the end of this year, so there's more people actually working for us actively at the moment than there ever have been before.

Why don't more girls play computer games?

RD: The way games first started, with space invaders and tennis games and all that, they were all abstract ideas. I mean there is a difference between males and females –

AA: Well spotted Richard.

RD: – and girls don't see the point of just moving around little shapes on the screen to make funny things out of them. You have to get something from it. We need to produce games or programs which have a different appeal, which is what we're looking into. There are things which a computer can do which a girl would be interested in using it for.

MC: Not 'Doll's House Simulator'!

RD: This game here, *Superhero* – I think it's very good and I think our audience will like it, but it is a man walking around a fantasy world doing abstract things. Girls are more down to earth, and they don't see any point. Why bother? There's no ultimate goal to it.

MC: There are differences, surely. Girls are more concentrated emotionally, while we chaps like to do technical things, I suppose.

RD: I guess you could say computers are very un-personal and un-social.

MC: Girls just aren't impressed by computers and all that. It's a useless chat-up line in bars to say, 'Hi, I'm a computer programmer' – it just doesn't work!

BE: We're thinking of specifically targeted products, three day eventing or something like that. There's a market there, half the population isn't being reached.

AA: Do you program much now?
RD: Not enough. The last game I finished was *Pro BMX*, which was in February.
AA: Does that bother you?
RD: Yes it does. I'm intending to spend more time on it now.
DD: There just isn't enough time. But we'd like to, because you get left behind very quickly: you have to be programming all the time to do state of the art stuff.
MC: It's a major problem: God just didn't put enough hours in the days. We've discovered recently that it's not how much money you have, it's time.

RD: Unfortunately most of the games we get sent, even if they try and send them to us as a finished product, we can only use it as a demo of their ability so that we might be able to commission something completely new from them. Because of our sales and marketing, there's only a certain variety of games we can put through the production line, and it's very unlikely that anything we get would fit the bill.
AA: Do you get sent heaps and heaps?
RD: Two or three a day.
AA: How many are completely useless and a waste of time, and how many lead to you commissioning games?
RD: Probably half are a waste of time... But it's very unfair, most of them are as good as the first games that we sold about 1982, '83. Most of them are up to that standard, but nowadays the standard is so much higher that it's very difficult for anyone to break into it. To start from nothing and produce a saleable game without outside help is very difficult indeed nowadays.

MC: It's interesting that all the programmers are our age, give or take a couple of years.
RD: That's the age group that could go from nothing to writing something that was publishable in six months, which isn't too big a slice of time. But nowadays, for someone with the same ability it would take a couple of years, because there's just so much experience about. I don't think there's any less ability.
AA: Do you see a problem in the future?
RD: I think young programmers need help, they need to be in close contact with a software house. And I think to be honest we try to do that. If someone sends us a game, and it's not marketable for some reason, we always try to tell them why.
AA: What are the usual faults?
RD: Probably the main fault is the copying of other games that already exist. For example, after the PCW show last year we had six *Arkanoid* games sent to us and we just had to say, 'No, sorry, can't use it'.
MC: We've got racks full of implementations of *Nemesis*. One arrived today... But we do take gambles on people, you get a hunch that they're a good programmer. And a lot of them make the grade. I don't think we'll have any problem with programmers in the future.

MC: The high-price guys like making cassettes for whatever it costs, 26p each, and selling it for £9.95 to the kids. There's a lot of very fat cats out there, and that's bad news. We're just undercutting them completely. It's fair, it's what capitalist society is all about.
RD: This game we've got on the screen here, for example **[Superhero *by Bernie Drummond*]** was submitted to us and to two high-price companies, and we outbid them. We're publishing it at £1.99, and they would have sold it at £10. We've actually spent two or three months improving it.

> *"Probably half the games sent in are a waste of time... But it's very unfair, most of them are as good as the first games we sold in 82, '83."*
> **David Darling**

BE: You've got to have quality games, that's fundamental. When you see some of the rubbish that some of the so-called full-price houses are fobbing off at £9.99 on their customers, it's appalling, disgusting. It's amoral. I know that's changing. There's been an enormous increase in product quality over the last six months, and I think we're partially responsible. We produce good stuff at £1.99, so anybody who wants to go out at £9.99 has to try and make it at least as good as ours. And anything that isn't looks pretty silly.
BE: Our games have a wide age-group appeal. David and Richard and their friends are in their twenties, so the games obviously appeal to that group, but at the same time they're played by John and Annie, who are four, and William who's eight – you might have seen him playing *ATV Simulator* on *Get Fresh* ***[Sunday 17th July]***. That's where the Code Masters playability comes from.

The Darlings on their programmers

AA: How do you manage to keep your programmers?
RD: Well, one difference between us and other companies, I think, is that all of us are either active or ex-programmers. So if we accept a game and there's something wrong with it, we know whether it's very easy or very difficult to fix; and if there's something we'd like, we know if it's going to be just a few pokes or three weeks' work. That makes it a lot easier to turn out good games, because we know – we don't just have to rely on what the programmer says. And of course we also offer quite a lot of technical support.
AA: You're unusual in that you know what you're talking about?
RD: Yes, I think so. In the other companies you have someone employed as a Software Acquisition Manager and they haven't programmed. You see it can work both ways. The programmer can trick the company by saying, 'Oh no that's impossible', and the company can inadvertently be very cruel to the programmers by saying, 'We need this changing', when it's only a very minor difference but it'll take three weeks' work to do it. You just can't tell, unless you actually know how a game works – a lot of things that look really easy are very difficult.
MC: And also the thing that kept me coming back is the deal Code Masters offer. I was a programmer, wrote five games, sold all of them to Code Masters and then I looked around –
RD: You did? You didn't tell me about that!
MC: – yeah I did, and I just couldn't get a better deal.
AA: Is that part of your policy, to try and nurture particular programmers?
RD: Yes. Ongoing programmers are much better, and in fact we offer them higher royalties. It makes it much easier if you know somebody. If they do a game and we say, 'No, we don't like it', they know they can go somewhere else with it. It hasn't happened yet, but it makes it easier for both sides.
DD: In-house programmers are a problem in some ways, I think. The incentives are all wrong. They're being paid full time and don't necessarily have the right motivation to achieve the same goals, to get a thing finished and ready for marketing.





• David and Phillip... Phillip and David... Er, the Oliver twins

AA: How did it all start?
Phillip Oliver: We started off with a strategy game in Basic, *Gambit*, which must have sold all of about 50 copies! We wrote it for a TV competition on *The Saturday Show* and won first prize. That was when we were in the fifth year, about four years ago or five was it? It wasn't fast – it took about half an hour to set up the screen!

> *"Code Masters wanted us to do another simulator after* Grand Prix Simulator, *so while we did* Dizzy *we did* Skiing *to keep them happy. We did both of them at the same time, last summer holidays. One was to keep them happy and the other was keeping us happy."*
> **– Phillip Oliver**

Andrew Oliver: Part of the prize was supposed to be getting the game published, but they didn't do anything about it so we took it away and showed it to some people. We told them it had been on TV and all that, and that attracted the interest of publishers. So Acornsoft, who were the biggest people at the time, agreed to market it.

Then we decided we had to learn machine code and wrote another game. But Acornsoft got bought up so we kept the advance and the game never got published! That was during our O-levels.

Next when we were in the sixth form we wrote an art package for Tony Rainbird but then OCP sent him a better one. We bought a nice car with the advance but the package never appeared. So we took it elsewhere.

AO: And we got ripped off good and proper.
PO: It was pitiful. That was a whole year.

[Nothing was paid for copies sold abroad, and the Olivers claim that no serious attempt was made to sell in Britain, so royalties could be avoided.]

PO: We were on the point of giving up. But at the PCW Show in September of '86 we met Richard and David Darling and discussed *Robin Hood*.

Then we went down to Mastertronics, and they just took the piss out of it. It's crap, they said, go away. That was the opinion of most people, but Codemasters saw it and loved it and offered us lots and lots of money. So we decided to leave school and set up as professional programmers.

[The success of* Robin Hood *was soon followed by* Ghost Hunters, Grand Prix, Dizzy, Skiing, 3D Starfighter, *and* Jetfighter. *More recently they have written* The Race Against Time, Fruit Machine Simulator *and others.]

AA: How long does it take to write a game from start to finish?
PO: Take *Robin Hood* as an example. We set ourselves the target of finishing it in a month. I worked on the movement of the man and the other things, and the arrows. Andrew worked on setting up the background, the scoring system, the high score grid and drawing a map. The two departments are not too interactive. In actual code, there is no interaction.
AO: Then we thought we'd do another one, only less soppy this time. More Rambo-ish. Hence *Ghostbusters*, which didn't do nearly so well, funnily enough. I think it's much better.
AA: What about design?

> *"Best game on the Amstrad (besides ours, of course)? –* Ikari Warriors. *Brilliant, and great programming. Good fun too. We actually went and bought it, and we still play it now. We finished it too."*
> **– Phillip Oliver**

On *Fruit Machine Simulator*

The Darlings

AA: What do you think when you get terrible reviews like *FMS?*
RD: All the magazines said 'What's the point of playing a fruit machine if you can't win any money?' That's very unfair because the game is a very good one.

It's very obvious from the packaging what it is and that you can't win money from it, obviously, so you can say that but then you should review the game and its qualities.

BE: Shopkeepers say kids come in asking about games, and the shopkeeper says it's won such-and-such an accolade, and the kid says, 'Yeah but what's it really like?'

The Oliver twins

PO: I don't know if you should print this, but Code Masters said, 'We've got a brilliant idea for a simulator – FRUIT MACHINE'. We said, 'Don't be stupid!' and went back to what we were doing.
AO: It was James Wilson, their artist, who wrote the whole game as a description. He wasn't a programmer, but it was a pretty good description – pages of it. A really weird way of doing it.
PO: When it came out on the Spectrum, sales were huge. Then James died in an accident after designing it. He was supposed to be working for us. The royalties were going to Jim's family, so we said we'd do it. And of course it's sold heaps.

On the CPC

The Darling brothers

DD: We've concentrated on Amstrad when sometimes other people haven't, and that's paid off. Even though the Amstrad market perhaps isn't that great, we have a following of people so that when we release our next Amstrad game people automatically buy it.

For us it's still a very good format, and we will definitely continue to produce games for it. Indeed I think the Amstrad is probably more important than the 64 for us.

RD: We're going to move into disk versions of games on the Amstrad. Price we're not sure about, but we always want to go for the lowest feasible price – it's the high price of the disk that's the limiting thing.

The Oliver twins

PO: Everyone seems to hate the Amstrad. Firebird said, 'Amstrad? Dead – we'll release it but it won't make any money'. But our royalty statements show there's a lot of money on the Amstrad.
AO: Everyone's going ST and Amiga mad at the moment, but the sales figures are pathetic compared to the Amstrad. OK so the games cost more and the royalties per game are bigger: but there's more memory, more graphics – most cases you've got to get in an artist because the programmer can't do it all.
PO: We're getting geared up for the 16-bit machines so we should have something out by Christmas. But we'll have stuff out for the CPC at Christmas, too: we're not going to ignore it.

PO: We spend maybe a week when we're finishing one project thinking about the next.
AA: If these things take a month or whatever to write, don't you have any hankering to spend six or eight months writing a real mega-game, an *Elite* or something?
AO: Nah, boring.
PO: We halve the time anyway, because there's two of us working on it. Also the more games we release the more we sell. If people buy one and like it they'll want to buy more games we write.

> *AA:* You use Maxam, yes?
> *PO:* We used to. Up until *Race Against Time*, then we bought a really powerful IBM clone that runs at 16Mhz or something. Code Masters sent it to us. It makes games run fast – you should see *Elite* on it! We've got this pinball game and you can't see the ball on it.
> We use that and we use the assembler PDS, Programmer's Development System. You just put the card in an IBM clone, lead it out to your Amstrad or whatever, type it in, it assembles very very quickly and it just copies out of memory straight across to the Amstrad. Maxam used to take about five minutes to assemble: this thing takes seconds.
> *AO:* We still take the same time, but it allows us to work more on a game. Changing things is so simple.

AO: You don't need to spend ages to make a game good. *Pro BMX* is good, and we didn't spend too long over that.
PO: If we spent six months over a game we couldn't build a reputation. We try to pump them out really quick so we can build up a reputation, a following. People like Jeff Minter, their games are rubbish, but people say, 'It's a Jeff Minter game, let's buy it.'

> *AO:* We're not famous as individuals. The name is famous, rather than us.
> *AO:* On the front of *Jet Bike Simulator* it said, 'By the famous Oliver twins', which was Bruce Everiss doing it as a joke. Now all the mail we get at Code Masters is addressed to 'The Famous Oliver Twins!'
> *PO:* We got one the other day to 'The Fairly Well Known Oliver Twins!'
> *AO:* The Oliver twins label sells games.

AA: After your unhappy experiences do you have a solicitor now?
PO: Yes, we have a solicitor and an accountant to look after us. If people tried to rip us off now we'd have a hell of a lot more clout.
AA: What advice would you offer young programmers?
PO: Well, we thought we were being really careful. We spoke to people and looked around and everything, and still got ripped off. Our advice, probably, is to steer clear of the computer industry! They assume all programmers are schoolkids, and they just know you can't afford to take them to court.

AO: Our accountant advised us to take on a mortgage.
AA: How do you feel about taking on a mortgage at your age?
AO: We could actually pay it off in one go anyway, but he says we'd be better off getting the joint mortgage tax relief.
AA: What are you going to be doing in five years' time?
PO: Retire! No, our parents asked us that, they threatened to kick us out of the house if we carried on writing computer games. They say, 'No way should you be running a business at your age'. They thought we should go to university and build for the future.
But there are lots of people with degrees who can't get jobs – what employers want is experience.

Do you want to be a Code Master?

Code Masters are looking for someone to work for them!
But before you rush off to write your application, to be eligible you must have wide experience in the computer games industry. They are looking for someone who has had machine code games *published*.
If you can honestly say you fit the bill, write to: **Code Masters, Lower Farm House, Stoneythorpe, Southam, Warcs CV33 ODL.**
If you send your application to *AA* you're obviously thick and you won't get the job.

AO: There's no reason why we shouldn't still be doing this. People will still be buying games, we'll still be selling them.



On the Darlings

PO: Richard and David are our age, they write games and they're on our level. Whereas Mastertronics have this 50 year old bloke who doesn't give a sod so long as he can get his cassettes into the shops. He doesn't care what's on it.
AO: Richard and David care about the programmers, they don't have this attitude that there'll always be another schoolkid coming along. They themselves were programmers being ripped off one time, and they could say to us, 'We know what it's like'. And the other attitude is so short-sighted, because you'll lose anybody who's any good. I don't think Code Masters have lost anybody yet.
AA: You trust them?
PO: You have to. I trust them more than I trust anybody else in the industry. They're in a powerful position, if they wanted to rip us off they are capable of doing it. But they have always had the policy of acting innocently. We've never caught them out in anything, so I trust them more than anyone else. Everybody else I've ever dealt with in the industry, I've found they're doing something. We've dealt with lots of people, and talked to others who've also been ripped off. It's an amazing industry.
AO: There's another reason why we trust Code Masters. Our programming skill is matched by loads of other people, but if you ask them how much money they've got it's pitiful compared with how much we've got. That's why we keep writing for Code Masters.

What a giveaway!

The latest Code Masters title, *Professional Soccer Simulator*, is so new that the packaging has not yet been devised, so we can't show you the cover. What we can tell you is that it's a Code Masters Plus game which will be in the shops at £4.99 and features eleven a side on one tape in both standard and expert versions; and street soccer, indoor soccer and soccer skills on the second tape.

And we're giving away *50* copies! Simply write with your name and address to: *Code Masters, Amstrad Action*, 4 Queen St, Bath, Avon, BA1 1EJ.

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S.D.C.

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David Brooke, 8 Birkby Grove, Bilton Grange, Hull, HU9 4PZ

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ACTION TEST

All the best new CPC games

The Bard's Tale finally arrives – and cruises in as *Mastergame*. But is it role-playing?

We begin, though, with a new Code Masters simulator (shock horror).

Also this month: *Football Manager*, the first of its kind, returns; *Mickey Mouse*; *Night Raider*; *Street Sports Basketball*; *Chubby Gristle* – as gruesome as his name suggests – *Night Raider* and the curiously named *Psycho Pigs UXB*. What *will* they think of next?

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PRO BMX

Codemasters Plus ● £4.99 cass
joystick/keys

The latest Oliver twins project is an update of Richard Darling's *BMX Simulator*, reviewed in *AA*21. The scenario is almost identical, with the major difference the number of players. The original had up to two players, but now you can have three on keyboard and one on joystick – it could get crowded! (If there are fewer than four players the others are computer controlled.)

Across the bottom of the screen are the names of, and times for, the four bikers, while the rest of the screen gives a bird's eye view of the course. Each biker is a different colour, and not surprisingly they are also viewed from above.

Your objective is to complete each track within a predetermined time limit. The first track must be completed within 100 seconds, a limit which decreases considerably on subsequent courses. The first track is no problem to complete, but life soon becomes more difficult.

Each track has of mounds of earth, hay bales, metal barriers and a variety of other hazardous objects. Earth piles disrupt the bike's trajectory and the other objects send you flying over the handle bars. When you're knocked off you lose valuable time and remount facing in a random direction. On the first course you can afford to crash many times, but by the time you reach the third track one crash can end your game. If a human player fails to qualify he's replaced by a computer biker, until all the humans are out.

As with the previous Codemasters Plus, *The Race Against Time*, you get two cassettes for your fiver. The first contains the standard version on one side, and the expert version on the other. (The latter is tougher, but offers a choice of tyre widths and chainwheel sizes. Narrow tyres allow you to move faster, but they're not as good for turning corners. Small chainwheel sizes give you better acceleration, but a lower top speed. Riders can bump into each other in the expert version too.)



● One lap down... Two to go

The second tape has two sets of extra courses – quarry and desert – that can be loaded into either standard or expert game. The final track in each set can't be raced unless you're playing the expert version of the game.

The background graphics that represent each course are detailed and colourful, but it has to be said that the bikes are small and sometimes it's difficult working out which way you're facing.

Green screen owners are going to have difficulty working out which bike is which. And don't expect digitised speech in this one – apparently there wasn't enough memory left. Sound effects are crude, but an excellent tune plays on the title screen.

The first few games are miserable, because of the tricky control of the bikes, but practice does make perfect. It looks and plays very much like *Jet Bike Simulator* – another in the Codemasters stable – and possesses the same frustrating and addictive qualities. The extra courses extend the game's life. Altogether *Pro BMX* is nothing new, but the four player option makes it immensely enjoyable. Once you've completed it you're unlikely to play again, unless it's against other human players. **GBH**

FIRST DAY TARGET
Complete four tracks

SECOND OPINION

"Definitely good enough to stand on its own. It appears the graphics haven't been touched up for the CPC – this is particularly noticeable on the large player views.

Griping apart, the bikes can turn on a sixpence, which makes the game quite fun. I've seen less enjoyable full price games. Oh yeah, one final thing: why can't you change the names of the players?" **PbM**

GREEN SCREEN:
Identifying bikes is tricky

The Verdict

GRAPHICS 67%
- Bright and colourful backgrounds.
- Bikes are a little small.

SONICS 38%
- Excellent title tune.
- Feeble in game effects.

GRAB FACTOR 53%
- The option of up to four players adds to the fun.
- Very difficult to control initially.

STAYING POWER 74%
- Two versions of the game, standard and expert.
- Three different sets of courses. extend the game's life.

AA RATING 74%
- Well worth a fiver – more than can be said of many full price titles.

THE BARD'S TALE

Electronic Arts ● £8.95 cass, £14.95 disk keys only

MASTER GAME

Role-playing games have been around for well over ten years now, ever since Dungeons and Dragons back in 1974. They are set in many different times and places: fantasy is by far the most popular, but there are also science fiction, gothic horror and even cartoon settings. In their original form, they are played by a group of people – from two upwards, though four or more is better – one of whom is a 'Games Master' (GM) controlling the opposition to the players and the world in which they live. The players decide what they want their characters to do and dice are usually rolled to determine whether or not they succeed. For more information see Iain Livingstone's *Dicing with Dragons* (RKP, £6.95, ISBN 0-71100-946-63), or find a local club (universities are teeming with them).

The term 'role-playing game' has been has been bandied around very loosely and linked with many computer games. But a group of adventurers wandering around killing things doesn't constitute a role-playing game, whatever the software houses try to tell you.

***Swords and Sorcery* by PSS, *Wizard Warz* by US Gold, *Mandragore* by Infogrames and *Ring of Darkness* by Wintersoft all claimed to be role-playing games, but none is more than a standard hack and slay: go into room, kill monsters, take treasure.**

A role-playing character is a person with emotions, strengths and weaknesses just like you or me. After you've played a character for a while you get to think like him or her and know what they would do in any situation. So far no company has managed to translate that freedom and sophistication of role-playing to computer. It was hoped that Advanced Dungeons and Dragons (AD&D) would correct this. *Pool of Radiance* was planned as the first AD&D game, but since it's not coming out on the CPC we must look elsewhere for true role-playing.

And so to the crucial question: have Electronic Arts, with *The Bard's Tale*, produced a role-playing game – or is it just another hack and slay?

Reach for your sword! Grab your staff! Don your armour! Yes, it's time to go adventuring. Skara Brae is under the domination of the evil wizard Mangar and you (you reckless, heroic person you) volunteer to free the town of his control.

Begin at the Adventurer's Guild by creating a six-pack of heroes in a quaint form of genetic engineering. There's a ready made group, but really it's much more fun starting from scratch. Each member is from one of seven races – human, elf, dwarf, hobbit, half-elf, half orc and gnome – and from one of ten classes – warrior, paladin, rogue, hunter, monk, bard, conjurer, magician, sorcerer and wizard. At start of play each member of the party can be any character class except for sorcerer and wizard.

There are three main windows: graphics, text and character. The graphics window shows your location, any monsters present or the currently selected character. The text window displays detailed information on the character selected, together with menus and messages. The character window gives the basic information on each character. A space between the text and graphics windows shows spell icons.

Five primary statistics, on a scale of one to 18, determine how good the character is in its chosen profession: strength, intelligence, dexterity, constitution and luck. Three secondary statistics are dependent on the primaries: armour class,

Class distinctions

- **The *warrior* is a poor persecuted individual who always ends up in the front row hacking away at monsters and getting hacked in the process. He suffers no restrictions on armour and can use virtually any weapon.**
- **A *paladin* is a warrior sworn to destroy evil wherever it's found. He uses all the weapons that a warrior does and possesses a resistance to evil magic.**
- **The *rogue* prefers stealth to combat and has the rather useful ability to find and remove traps on treasure chests.**
- **The *hunter* is another warrior type who can strike a special kind of blow known as a critical which slays an opponent instantly.**
- ***The monk* is heavily into martial arts. He fights with hands and feet and gets more lethal as he progresses.**
- ***The bard* is another subclass of the warrior, but he can also play musical instruments and sing, with an effect similar to some of the magical spells.**
- ***The conjurer* casts spells and specialises in creation and healing.**
- ***The magicians* deals with enchantments that makes the recipient harder to hit or increases weapon power.**
- ***The sorcerer* creates illusions and uses mind-affecting magic.**
- **Finally, *the Wizard* has power over undead creatures and demons.**



● It's taken a long time to get there, but now Winserind can cast seventh level magic spells



● The Review Board is the place to go for training

Race relations

- ***Humans* are the standard on which all others are based.**
- ***Elves* make excellent spell casters but are weaker than humans.**
- ***Dwarves* are strong and resilient but lack brains. Make excellent warriors.**
- ***Hobbits* are stealthy and dextrous: ideal candidates for rogues.**
- ***Half-Elves* are the offspring of human and elf. Combine strength and magical ability.**
- ***Half-Orcs* are the result of breeding between orcs and humans. Ugly and stupid, but make up for it in strength.**
- ***Gnomes* are more magically gifted than dwarves.**

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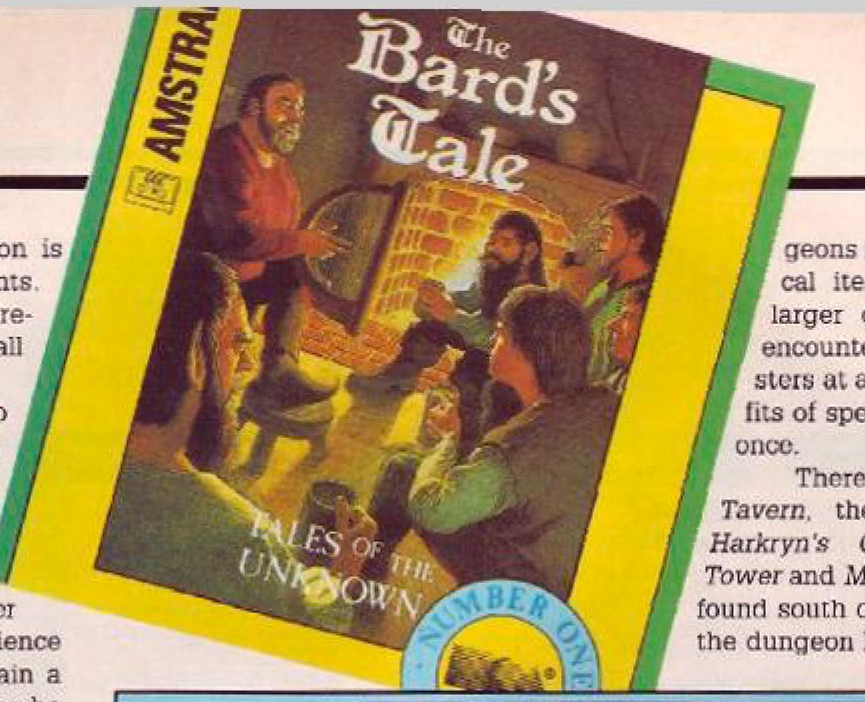
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VISA

hit points and spell points. Condition is your current amount of hit points. Should you have the lack of luck or foresight to allow your hit points to fall below one the character dies.

Every character begins with zero experience points and at first level. Characters gain experience from killing monsters and when enough are gained you increase your level. A second level character requires 2000 experience points, but the higher the character's level the more experience points you need to go further. To gain a level you must find the Review Board who train you to your next level. Spell casters know the first level spells in their chosen profession of magician or conjurer.





Garth's shoppe sells a wide variety of equipment.



A code reminds you of the character's class

A source of light enables you to see

There are seven levels of spells in each class. Extra spell levels are gained every time the character gains two levels. Training is free, but extra spell levels cost money, with high level spells coming very expensive indeed. When a spell caster has attained three or more spell levels in his original class he can change to another. The sorcerer, conjurer and magician can be chosen as a second class and any can be chosen as a third or fourth class. A spell caster that can cast all seven levels of spells in the four classes is called an *Archmage*.

The labyrinthine town of Skara Brae has many buildings to explore. Some are empty, while others contain monsters. Apart from the *Adventurer's Guild* there are several other buildings of use to you. *Garth's Equipment Shoppe* is the place to go to buy or sell goods. He stocks weapons, armour, torches and musical instruments. *Taverns* are essential if you have a bard in the party, because if his throat gets dry he can't sing. *Temples* are places of healing where you can go to have characters healed or even resurrected. Finally there's *Roscoe's Energy Emporium* where your spell casters can have their magic points recharged rapidly – at a price, naturally. If Roscoe is too expensive you can wait for them to be replenished.

Scattered around the town are several statues of *ogre lords, giants, golems, samurai* and a *dragon*. They are guardians to parts of the town and the only way past is by killing them. The dragon is the deadliest, because he breathes fire and can fry the entire party in a single puff. The sealed off sections of town contain dungeons holding more treasure, magical items and monsters in much larger quantities. Here you'll first encounter multiple groups of monsters at a time and discover the benefits of spells that affect several foes at once.

There are five dungeons in all: the *Tavern*, the *Mad God's Catacombs, Harkryn's Castle, Kylearan's Amber Tower* and *Mangars Tower*. The Tavern is found south of the Samurai and you enter the dungeon by ordering wine there. (You

● Information on monsters, characters and your location

A special – a monster fighting for the party

Armour class determines how difficult they are to hit



The character's hit points. Ackemup's had it

Party members are listed here

Spell points are spent casting spells

View of points

- A character with a *high strength (ST)* value causes more damage with any blows from hands or weapons.
- *High intelligence (IQ)* determines how many points a spell caster has to cast spells with.
- The greater your *dexterity (DX)* the more likely you are to strike first blow and you're also harder to hit.
- A high *constitution (CN)* means you have more hit points which makes you more difficult to kill.
- *Luck (LK)* gives you a better chance of avoiding traps and evil magic.
- Your *armour class (AC)* determines how easy or difficult you are to hit, 10 is easy to hit and -10 is very difficult.
- *Hit points (HITS)* are the amount of damage you can take before dying.
- *Spell points* are used to cast spells. More powerful spells cost more points.



SECOND OPINION

"I must admit that at first this game was very confusing. After some ten minutes my first party had bitten the dust. Gradually you build up a degree of skill at the game, using your mind rather than your fingers.

If future releases in this genre can come up to the standard of Bard's Tale *then I can see them gaining a cult following."* **PbM**

GREEN SCREEN: Excellent



● Beware of the fire-breathing dragon

are well advised to have some fourth level characters before entering the Cellars.) There is an exit to the Sewers in the Cellars and fifth level characters are advisable before you venture into them. Mangar's tower is the last place that you want to go and you need to be very high level to take on that.

Don't expect stunning graphics. You can tell what the monsters are supposed to be, but they're not brilliantly drawn. Sound is limited to footsteps and tunes played by the Bard.

The game is multi-load and comes on two cassettes or one disk. If you want a game of largely mindless violence with the merest hint of role-playing then take a look at this. **GBH**

FIRST DAY TARGET
Get a party of third level characters

The Verdict

GRAPHICS 43%
- □ The monsters are easy to identify...
- ■ but there aren't many different types.

SONICS 54%
- □ The Bard's tunes are excellent.

GRAB FACTOR 91%
- □ The ability to create your own adventurers gives it a little more appeal.
- □ There's more to this than a mere shoot-'em-up and you certainly get value for money.

STAYING POWER 87%
- □ As your characters gain experience you become attached to them and fear for their safety.
- □ Creating high level characters is a long term task.

AA RATING 90%
- □ Not role-playing, but nonetheless a very entertaining game.

NIGHT RAIDER

Gremlin ● £9.99 cass, £14.99 disk joystick or keys

You have a choice of practice, or flying missions. Take plenty of practice at the controls of the Grumman Avenger, the plane that makes the attack on the Bismarck. Practice is split into four sections: take off, landing, flying and attacking the Bismarck.

The Bismarck, armed with eight 38cm and six 15cm guns and six Arado Ar 196 seaplanes, was one of the most feared German battleships of World War II. The Allied search for it was a high priority and she was eventually found on May 20th 1941. The Royal Navy was despatched to sink her, catching up on May 24th. Six British destroyers, the cruiser HMS Hood and the battleship Prince of Wales attacked, and Hood went to the bottom of the ocean as a result. The attack was effective, though: the Bismarck's port rudder was hit, making her a sitting target as the stricken ship circled slowly around.

On the pilot screen you control the plane's direction with the joystick, but when anything comes at you, you can switch to a forward gun. The engineer's screen has a large array of instruments that give information on your engines, undercarriage, fuel, wings and torpedoes.

Once you've practised your flying and attacking skills it's time to go on a mission. The most dangerous – the sinking of the Bismarck – is also the most satisfying.

There are four screens – pilot, navigater, engineer and tail gunner – and all



● The engineer's panel showing instruments

are necessary to complete your mission. The pilot screen shows a forward view through the cockpit and the instrument panel below it. A map is displayed on the navigator screen to plot your courses. The engineer screen gives information on the aircraft's status.

Completing the missions should keep you occupied for several months. The combination of simulation and strategy game works well, though the emphasis is very much on the simulation. Well worth a look if you're an avid simulationist.

GBH

FIRST DAY TARGET
Complete Mission 1

SECOND OPINION

"My first impression was of a badly converted arcade effort. After playing a couple of times the simulation aspects of the game became more apparent....

Bank left! Keep her steady. Shoot the bomber - oh dear, I'm in the Atlantic again. And totally hooked." **PbM**

GREEN SCREEN: All clear

The Verdict

GRAPHICS 45%
- □ Control panels are done very well.
- ■ Colour could be better.

SONICS 23%
- ■ Simple engine and gun effects.

GRAB FACTOR 65%
- □ Practice mode gives you the chance to prepare for the missions.
- □ You can just play the practice options if all you want to do is blow things up.

STAYING POWER 74%
- □ Missions of varying difficulty.
- ■ After completing them all you may not want to play again.

AA RATING 69%
- □ One of the better recent simulations.

FOOTBALL MANAGER II

Addictive ● £9.99 cass, £14.99 disk joystick/keys

Football Manager, the first of its kind, was reviewed way back in *AA1*, when England's European Championship humiliation was no more than a Bobby Robson nightmare. *Big League Soccer* and *Football Director* were in a similar mould: now Addictive bounce back with a sequel. Come and have a go if you think you're hard enough.

This is a game of two halves, Brian: strategy and highlights. The strategy is all done using menus and pointers, while the match highlights show a 3D view of the pitch with small animated players running, tackling and kicking.

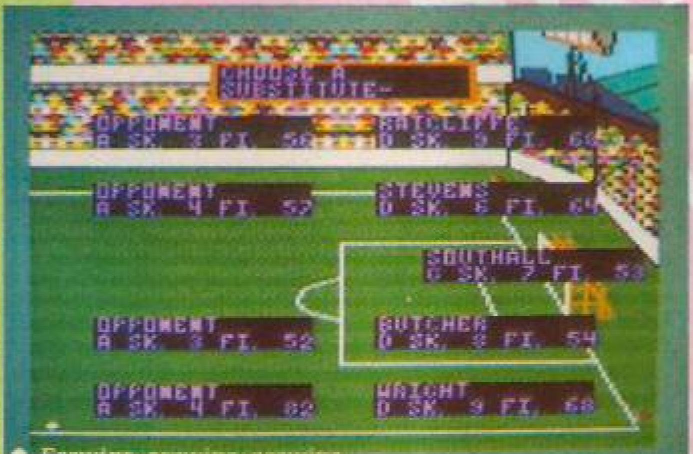
SECOND OPINION

"If you are a certified footer loony this could well be the management game for you. I'm not quite clear why anyone would want to play what is really only a text/database-handling game when they could be out there playing the real thing – that's right, Matchday II! *But if you have to have it, you certainly won't be disappointed.*

I agree wholeheartedly that the highlights should be optional: I never felt involved enough to concentrate on them, and found my attention wandering. Still, when all is said and done, the Addictive team done great, and that can only be good for the game." **SC**

GREEN SCREEN: Champion

Before you play you choose a team and skill level (out of three). There's the whole league to choose from, but you start off in the fourth division. Picking your team is more precise in this sequel than it was in the original: you position a player on the screen instead of just placing him by number. Your opponent's players are shown opposite yours so that you have some idea of what you're up against. Put a good player against a bad and you're more likely to tackle and beat him to the ball. Pick a couple of substitutes and it's time to watch the highlights. Earwigo, earwigo, earwigo.



● Earwigo, earwigo, earwigo...

It was the terrible graphics in *Football Manager* that lost it most points and made the most loyal of supporters sick as a treeful of parrots. They are a vast improvement this time, but remain such a waste of time that I still would love to be able to switch them off. The highlights are fun for the first few matches, but you soon get bored of them. And after all strategy is more important than graphics in a game like this.



● You pick your team...

At half time you can make a substitution if you wish, or change tactics by moving players. When the final whistle blows the day's results are displayed and the league table updated. Players can be bought or sold and you can even give them some extra training between matches. And like real players they get injured from time to time too. At the end of every turn you receive a financial report on gate receipts, wages and players bought and sold. There's also a chance to join the FA Cup and League Cup roads to Wember-ly.

Sound is limited to crowd-cheering during matches and the thwack of boot on leather. Unfortunately that most nostalgic of noises, the hiss of the ball as it strikes the back of the net, is not included, but you can't have everything. The menus are well presented and the match highlights are colourful, though they flicker.



● Then watch the obligatory highlights

It comes as a pleasure to reveal the final score: *FMII* beats *Football Manager* by a hatful of goals. *Big League Soccer* still has the edge after extra time and penalties on the grounds that you don't spend as much time watching matches, but there isn't really much in it.

You'll find yourself, like me, playing *FMII* well into the night. **GBH**

FIRST DAY TARGET
Get promoted to division three on the second level

The Verdict

GRAPHICS 48%
- Colourful and well animated match highlights.
- Menus are done well too.

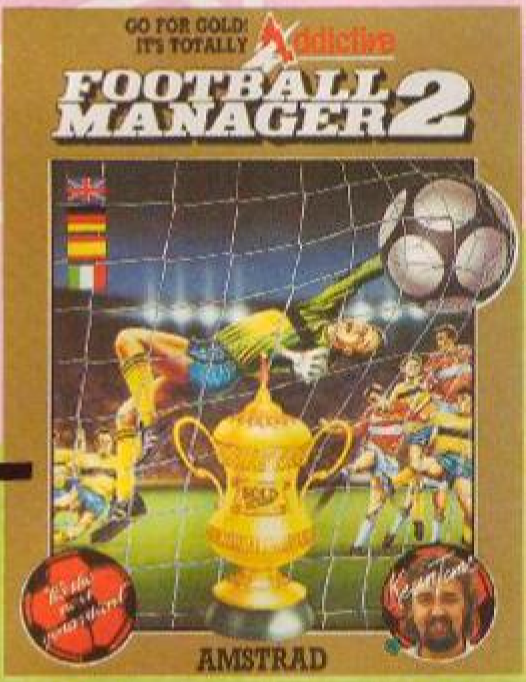
SONICS 19%
- ■ A cheering crowd is the best you get.

GRAB FACTOR 64%
- Football fans will be over the moon.
- Friendly menus make it easy just to start playing.

STAYING POWER 78%
- Football management games get played rather than completed.
- ■ Match highlights tend to irritate after a while.

AA RATING 72%
- A fun strategy game that should keep you busy for many months.

AA funny fact No. 1
Did you know that Steve Carey supports West Brom?





MICKEY MOUSE

Gremlin ● £9.99 cass, £14.99 disk joystick/keys



The most famous mouse of all time has arrived to save the world – well, Disney Castle anyway. The evil Ogre King has stolen the Wand of Merlin and used it to cast a sleeping spell all over Disneyland. He then broke the wand into four and gave the pieces over to the care of the four witches: North, South, East and West. The witches have used their sections of the wand and some magic water (also stolen from Merlin) to conjure monsters to guard their towers. Only one bottle of magic water was left and that has been put into an enchanted water pistol. Mickey, armed with the enchanted water pistol and a large rubber mallet, has the task of collecting the four segments of wand and defeating the Ogre King.

Disney Castle is split into four towers, each occupied by a witch. The screen shows a view slightly above floor level so that you're looking down and into the tower. You start play at the bottom of the first tower next to a boarded up door. A ladder leads to the next level and your objective is to reach the top of the tower. The witch's monstrous minions walk through doors (or walls) and do their best to drain you of magic water. There are four types of monster: ogres, ghosts, skeletons and disembodied heads (called hedleys). The ogres and skeletons can be bopped with the mallet, though all that does to an ogre is create two little ogres. Little ogres can be squished with a single mallet blow. Hedleys and ghosts are only affected by the water pistol.

When a monster dies it leaves behind an object that can be picked up and it then appears as an icon, or it could just be magic water which re-charges you. There are eight different icons that can be collected: key, bomb, bird's head, glue, shield, repulsiveness, slow and lightning.

When you have a key you can go through the doorways and into one of the four sub-games – puddle maze, bubble machine, pump room and dripping taps. In the puddle maze you have to explore the multi-screen maze looking for a hammer, nails and some wood. When you have all three you go out of the exit and the door is nailed shut. Inside the maze you have three lives and if you touch a roaming bubble you lose a life. Lose all three and you're thrown out of the maze. There's also a skull that drains a life and a heart that gives you a bonus life.

In the bubble machine you must run along a platform and burst the bubbles that float upwards. If a bubble hits the platform that you're on it eats away at it until eventually a hole appears. Fall through the hole or lose all three lives and you must leave the bubble machine. Ghosts live in the bubble machine and if they touch you for too long you lose a life. The bubbles are produced by magic water and you have to be around when all of the water has drained away to obtain the hammer, nails and wood. The pump room has corks that must be hammered into holes before you can leave and the dripping taps need to be turned off in a particular order. Both the pump room and tap room have nasty monsters who seek to take away your lives.

If you block every door in the tower then you can go to the top floor where you find a section of wand and after all four towers are completed you can take on the Ogre King.

Part way through loading, the game pauses to play the tune (from the Sorcerer's Apprentice, I think) and it's done very well. Sound effects are simple, but serviceable. Graphics are bright and colourful and the animation good. The vertical scrolling is very smooth.

Mickey is unusual in that, unlike most games, it seems neither too hard nor too easy. It's tricky at first, but you build up expertise and eventually you'll complete the game. Licences are often very badly done – perhaps because there's so little money left after the licence is paid for – but Gremlin appear to have put a lot of effort into this one. It has paid off handsomely. **GBH**

SECOND OPINION

"Colourful, smooth, varied, entertaining. Not a 'Mickey Mouse' (=naff) game at all – more a 'Moustergame' (ouch). It remains to be seen whether the presumably large sum spent securing one of Disney's greatest names has been well spent – Gremlin obviously think people like what they know. But this deserves to do well, simply because it's good." **SC**

GREEN SCREEN VIEW: No worries

Mickey's icons

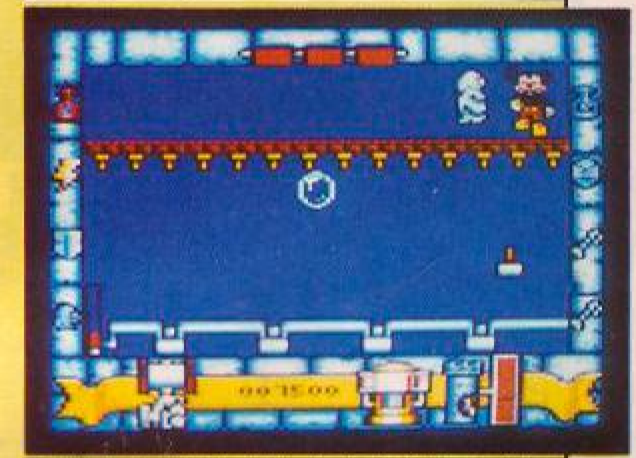
- **Key: Needed to open doors**
- **Bomb: All monsters on screen go boom**
- **Bird's Head: Mickey doesn't fall off ledges when this has been collected**
- **Glue: Sticks all of the monsters to the spot for a while**
- **Shield: Stops monsters from draining magic water**
- **Repulsiveness: All the monsters run away from Mickey**
- **Slow: Monsters move at half speed**
- **Lightning: Mickey moves at double speed**

FIRST DAY TARGET
Complete tower one





● The bubble maze: Mickey approaches the hammer



● Mickey bursts bubbles in the bubble machine

The Verdict

GRAPHICS **90%**
- Smooth vertical scrolling.
- Very colourful graphics.

SONICS **76%**
- Excellent loading tune.

GRAB FACTOR **83%**
- Ogre bashing and ghost splashing is great fun.
- ■ A little confusing at first.

STAYING POWER **87%**
- Four towers of increasing difficulty to complete.
- The sub-games add variation to the game.

AA RATING **87%**
- For once a licence has turned out a very good game.

ROMANTIC ROBOT *present*

1988 – THE YEAR OF THE ROBOT

RESET ● **multiface two** ● STOP

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MULTIFACE is extremely simple to use, friendly, idiot-proof, menu-driven with on-screen instructions, fully automatic – PURE MAGIC. It can be used on any CPC, comes with a cable and an extension bus for £47.95 ONLY! By the time you buy 10 programs on tape instead of disk – MULTIFACE will put them on disk for you – you will have saved some £50 which is more than the cost of a MULTIFACE. The money you save on further tapes is all yours!

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That alone would have satisfied many people, but Romantic Robot has gone one step further, incorporating a memory editor. No program is safe with this: everything is out in the open, including the Z80 registers, CRTC data and any part of memory.

Don't be fooled into thinking this will result in mass piracy, however. The *Multiface* unit itself must be plugged into your Amstrad to allow reloading of a program it saved.

Multiface II must be the cleverest hardware device at present – a necessity for disk owners who thought they were stuck with loading from tape every time.

AMSTRAD ACTION JANUARY 1987

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STUNT BIKE

Silverbird ● £1.99 cass
joystick/keys



● Lorry catching is one of the easiest stages

You, Chad Adams, are the world's greatest stuntman, and to prove it you have set yourself five stunts to complete within a tight time limit. The screen shows a horizontally scrolling playing area with you and your motorbike viewed from the side. Above is the time remaining and your score.

Three attempts can be made at each stunt before the game ends.

In stunt **one** you have to jump from a hang-glider and land on your bike. The road, however, is filled with cracks (didn't do your preparation, did you?) and other obstacles which make the timing of the drop even more difficult than it would already have been.

Stunt **two** is log jumping: you have to raise your front wheel over a log and then do the same with the rear. If you don't do both then the bike falls over and time is lost. Some logs can be driven around instead of jumped.

The **third** stunt is similar to the log jump except that instead of the bike jumping you leap out of the saddle and must land back on the bike after passing through flaming loops. **Fourth** is lorry catching, in which you have to avoid obstacles (again) and get onto the back of a lorry. **Fifth** and finally there's helicopter hanging – more or less the reverse of the hang-glider stunt. All you do is leap off the bike and grab the helicopter. So that's alright then. No sweat. And you thought it was going to be difficult!

Yet another game in which there is absolutely no sound whatsoever. The horizontal scrolling is smooth, but slow. Colour is used well and there are some very large sprites.

It lacks sound and you don't really get the urge to keep playing because there's so little to do. Once you've completed the game you'll never play again. Overpriced.

GBH

SECOND OPINION

"Five variations on the up-down-left-right syndrome. They're not particularly difficult to complete either. And once you've done it, Game Over. So empty it's practically a vacuum." **PbM**

GREEN SCREEN:No worse

FIRST DAY TARGET:
Complete the fire hoop jumping

The Verdict

GRAPHICS 46%
- ☐ Good use of colour.
- ■ Slow horizontal scrolling.

SONICS 0%
- ■ Ain't none..

GRAB FACTOR 34%
- ■ First stunt is one of the most difficult.

STAYING POWER 28%
- ■ Only five stunts to complete.
- ■ Disappointing win routine. You won't play it again.

AA RATING 29%
- ■ You could buy a lot of chocolate for £2.

NINJA SCOOTER

Silverbird ● £1.99 cass
joystick/keys



● Is it a bird? Is it a plane? No, it's some headcase on a scooter

Ever played *Trailblazer?* If so you'll soon spot similarities. The idea is similar: you charge across terrain avoiding and jumping over things trying to reach the end of the level in the time limit. The difference is that in *Trailblazer* the terrain came out towards you, while here it scrolls right to left.

Each level, four rows deep and many screens long, has a bar across the bottom of the screen to indicate the length of the level. A clock at the top counts down the time you have left to reach the end of the level and alongside it is your score. You have one life and that's lost when time runs out. Bonus points are awarded at the end of the level for any time remaining.

The levels are composed of seven different objects: empty squares, holes, walls, ramps, watches, bumps and speed-ups. Falling in holes or hitting walls knocks you off the scooter and loses you valuable time; bumps slow you down; ramps launch you into the air; speed-ups make you go very much faster – but the effect only lasts to the end of a level, or until you crash into something. Collecting a watch adds to the amount of time remaining to complete the level.

There are also skulls, cars, skateboarders and clubbers, all of which knock you over when you touch them.

A fast and furious tune plays throughout, but there are no sound effects. The scrolling of the graphics is very jerky, but speed is what counts – and there is plenty of that. The sprites are rather better on colour than animation.

Ninja has little going for it in originality or technical excellence, but it makes up for it in playability. The one major criticism that I have is difficulty. It's too easy to complete levels and you may get bored with it too quickly. Having said that, however, I'm aware that level of difficulty is notoriously difficult to get right, and what one player may find a cinch another may struggle for weeks to complete. **GBH**

SECOND OPINION

"If you're not terribly good at games (like me) you could find yourself attracted to this. I mean, how many games can you get to level 36 on your first attempt?

It's put together quite well, with the jumps and speed ups adding variety." **PbM**

GREEN SCREEN:No problem

FIRST DAY TARGET:
Complete 20 levels

The Verdict

GRAPHICS 46%
- ☐ Colourful sprites and backgrounds...
- ■ But the horizontal scrolling is terrible.

SONICS 58%
- ☐ Excellent continuous tune, but it could drive you crackers.

GRAB FACTOR 65%
- ☐ It has that elusive addictive quality that makes you want to keep playing.
- ☐ Very easy to play, even for novice gamers.

STAYING POWER 46%
- ☐ Loads of levels to complete.
- ■ You'll probably get bored before you lose.

AA RATING 63%
- ☐ Not mindblowingly original, but at £2 you can hardly go wrong.

BATTLESHIPS

Elite ● £1.99 cass
joystick/keys

We've had snooker, we've had skiing, we've had chess. Now here's another old game converted into a computer game. This time it's that paper and pen classic beloved of the back row of many a French class (and geography, maths, physics...). Battleships returns. You're the captain of a naval fleet and your mission is to destroy your opponent's fleet. Cold war politics still rule, OK?

There are one, two and multi-player options. The multi-player option lets you battle it out with friends and is also the only way to get on the scoreboard.

In the first part of the game you simply set up the map and position your boats where your opponent can't destroy them. Then you have the grid open with a moveable cursor to fire the shots. Press fire to launch a missile, and it marks a cross on the map to show where the missile has landed. Then watch the computer launch its shots on your fleet, and wait to see whether you have hit any of your opponent's ships or if he/she has hit any of yours. You go through the process again until either your fleet or your opponent's has been destoyed.

This review was written by Deian Lye of Bath, who spent a week with us on work experience.

The Verdict

GRAPHICS 52%
□ Well animated ships and fire.
■ The clouds are poorly done.

SONICS 40%
■ Explosions are terrible: a high pitched sound is all you get.
■ No tune during the game – only a short one while the game loads.

GRAB FACTOR 47%
□ It'll keep you amused for a few hours...
■ But you'll get bored after a few wins.

STAYING POWER 51%
□ Good fun destroying ships.
■ Frustrating when you can't finish off your opponent's last boat!

AA RATING 63%
□ A good game overall, but a pity it doesn't have better sound.



● Bombs away! *Battleships* are go

Graphics are OK – especially the fire on a ship that has been hit, and the SOS lifebelt when the ship has sunk. The clouds look like flying bushes but apart from that – and the sound, which isn't too healthy – everything is OK. All in all a good value budget game. DWL

FIRST DAY TARGET
Beat the computer opponent

SECOND OPINION
"A colourful, noisy blastergame that certainly isn't dead in the water. Trying to down that last enemy boat is intensely frustrating – but you feel really rewarded if you get it!" **SC**

GREEN SCREEN: No problem

STREET SPORTS BASKETBALL

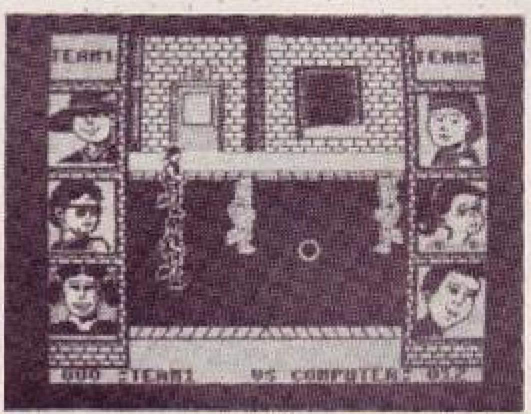
Epyx ● £9.99 cass, £14.99 disk
joystick/keys

An endless stream of sporting games flows from the software houses, and basketball is one of the most popular.

In this latest you get a choice of one or two player games and can pick your squad from a squad of ten players. There are four different courts to choose from. Each has its advantages and disadvantages: one, for instance, has an oil slick while another has a high curb making dribbling tricky (the caretaker should be sacked immediately). After you select a court a coin is tossed to see who has first pick of the ten players: each team must choose three. They have strengths and weaknesses you must balance.

Down either side of the screen are pictures of the players in each team and the rest is covered by the horizontally scrolling basketball court. The player nearest to the ball is the one you control, but you can change the selected player at any time with the fire button. One team wears black, the other blue, but – listen to this – the blue team player nearest to the ball is black and the black team player nearest is blue. There may not be many colours on screen at any one time, but if Epyx needed more colours they should have changed resolution rather than make the game more confusing. Not surprisingly there is little colour used in the game and characters themselves aren't brilliantly drawn. There are no sound effects or tunes.

Unless you're desperate for a basketball game then steer clear of this one. Epyx have produced much better products than this in the past, but *Street Basketball* doesn't bode well for *Street Sports Baseball*. **GBH**



● Beware oil slicks

The Verdict

GRAPHICS 29%
■ Hardly any colour at all...
■ And what there is, is badly used.

SONICS 0%
■ Silent as the grave.

GRAB FACTOR 46%
■ The selected player wears the same colour strip as your opponent. Ho hum.

STAYING POWER 46%
□ Computer opponent is tough.
■ Once you've beaten it you're only left with other human players.

AA RATING 44%
■ A sub-standard basketball game.

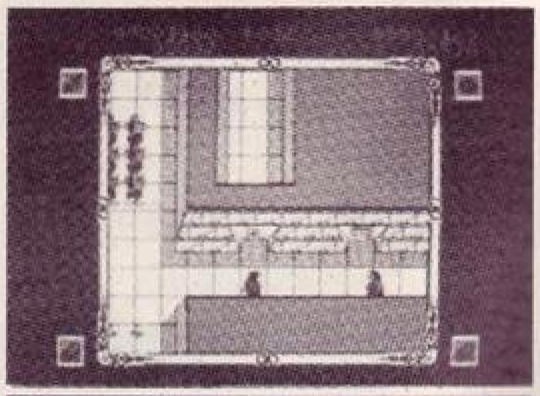
SECOND OPINION
"My first thought was 'Why is my team deformed?' The graphics are nothing short of grotesque.
My last thought was that the game must be a parody, because there's no real action or gameplay." **PbM**

GREEN SCREEN: Alright

FIRST DAY TARGET
Beat the computer in a 10 point game

SHACKLED

US Gold ● £9.99 cass, £14.99 disk joystick/keys



● Smooth scrolling in all four directions

The inhabitants of the local mysterious castle have been up to some naughty stuff. All your friends have been captured and chained up. What else is there for it, then (sigh), but to go rescue them?

The screen is a four way scrolling maze with icon panels down either side and score and energy at the top. When you run out of energy you die. One or two players take part.

The castle's many different levels get more difficult the deeper you go. On each there are cells, inside which are either friends or enemies. Enemies attack and knock down your energy. Sometimes an enemy drops something that can be collected when they die. Other objects increase your shot speed, make you move faster, add to your defence and increase your attack power. Friends follow you around when you release them, but desert you at the end of a level (with friends like this...).

You get a great tune on the title screen, but none in the game. Sound effects are nothing special, and the animation is not much better.

SECOND OPINION

"This is decidedly average. It has some nice things going for it – movement is quite smooth and sensitive, and for a while it's fun blasting the bad guys with their flame-throwing and general bad habits.

But what it lacks is a very high oh-go-on-just-one-more-go rating, without which no game stands much chance of occupying you for more than a few days." **SC**

GREEN SCREEN: It's OK

Gauntlet? Well yes, but the similarities are only in the style of game. *Gauntlet* has more grab and the urge to play again is nigh on irresistible. With this you get that deadly 'seen it all' before feeling. **GBH**

FIRST DAY TARGET
Score 15,000

The Verdict

GRAPHICS 43%
- □ Smooth four way scrolling.
- ■ Poor use of colour and weak animation.

SONICS 48%
- □ Great title tune.

GRAB FACTOR 54%
- □ Two player action gives it a little extra.
- ■ Instructions confuse at first.

STAYING POWER 46%
- □ Over 100 levels to complete...
- ■ But they're all much of a muchness.

AA RATING 49%
- ■ Yet another *Gauntlet* clone.

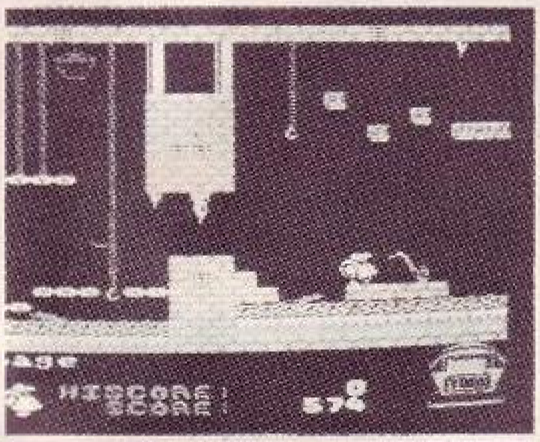
CHUBBY GRISTLE

Grand Slam ● £8.95 cass, £14.95 disk joystick/keys

A grossly fat car park attendant, Chubby Gristle lives to eat and be nasty. His ultimate ambition, which you can help him realise by playing this game, is to weigh in at a ton.

The screen has a small panel in which lives (four to begin with), score and weight are displayed. The rest is taken up by a series of platforms. You're reminded of *Jet Set Willy*, and the similarities extend beyond appearances and into gameplay, too.

Littered around the screens are objects you can eat to build up your weight and some others that may come in useful later on. The platforms have gaps between them with ladders, ropes and lifts provided for you to move between floors. Watch out, however, for things that move around the screen and can kill at a touch. Some stationary objects are likewise deadly.



● Meet Mr Gristle, the fat little

As with virtually every other platform game you ever saw, you get a continuous tune while you play. Beethoven it ain't, but I have heard worse. Graphics are small, but colour is used well and animation is simplistic.

Chubby Gristle is hardly state of the art. Platform games have been around for *Donkey Kong's* years, and this one has little new to offer.

SECOND OPINION

"Once upon a time there was Miner 49'er, *then there was* Donkey Kong, Lode Runner, Manic Miner, Jet Set Willy... *Now there's* Chubby Gristle. *If you think fat is funny you'll hoot, but if you're after something a little more original you'll probably give this a miss. It depends on what your collection of platform games is like.*

At budget price this would be a neat little game, but £9 on tape and £15 on disk? Come off it, Grand Slam!" **SC**

GREEN SCREEN: Ticketyboo

If you still find platform games enjoyable – if you have a platform soul – then you'll find plenty of timing problems and tricky positions to get out of before you complete the game. **GBH**

FIRST DAY TARGET
5,000 points

The Verdict

GRAPHICS 57%
- □ Colour is used well.
- ■ Sprites are on the small size.

SONICS 68%
- □ Great little tune plays throughout.

GRAB FACTOR 57%
- □ Easy enough to just pick up a joystick and play.
- ■ Frustrating if you get a situation where you can do nothing to avoid losing a life.

STAYING POWER 63%
- □ Some tricky problems to solve.
- ■ Only 20 screens to complete – not many as platform games go.

AA RATING 59%
- ■ A budget game – and a good one at that – at full price.

PSYCHO PIGS

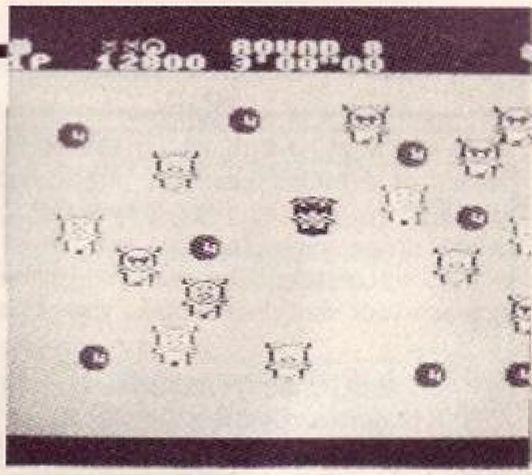
US Gold ● £9.99 cass, £14.99 disk
joystick/keys

You're a pig. Yes you are, you're a little pig (nothing personal), and you charge around throwing bombs at other little oinkers under the watchful eye of a referee.

Across the top of the screen is your score, number of lives and a space for objects. The rest of the screen consists of a large empty space with the occasional bomb or pig.

The bombs are lobbed at the pigs and any caught in the blast are killed. The other pigs can also toss bombs around and you lose a life if hit. Bombs have a number on them indicating how many seconds after throwing it will detonate. When all the pigs are dead you go onto the next level and after every third level there's a bonus screen in which you have to bash pigs on the head as they come out of holes in the ground.

Seven objects can be collected: tonic, rice ball, gas, knapsack, hyper bomb, sweet potato and 'I don't know'. Tonic allows you to throw further, rice balls make you go faster, and gas puts the other pigs to sleep. The knapsack allows you to carry more than one bomb and the hyper bomb sets off every bomb on screen. A sweet potato is just bonus points and 'I don't know' makes you resistant to explosions.



● *Psycho Pigs* do it in sty-le. Or rather, not

SECOND OPINION
"Budget, yes. Full price, no." **SC**

GREEN SCREEN:
Some problems identifying porkers

A frantic oinky sort of a tune plays throughout, and the explosions are done well. The pig sprites are nicely drawn. Background graphics on the main part of the game – just a plain screen – are pathetic.

The Verdict

GRAPHICS 26%
- □ Pigs are identifiable.
- ■ Backgrounds are pathetic.

SONICS 64%
- □ The tune is marvellous.

GRAB FACTOR 38%
- □ Dancing pigs on the title screen.
- ■ Throw bombs. Fall asleep.

STAYING POWER 26%
- ■ Not in the least bit difficult.
- ■ Every screen's the same.

AA RATING 28%
- ■ A tenner or £15 for *this?*

The only good things about *Psycho Pigs* are the tune and the title. Gameplay is just too easy and even the most incompetent games player in the world won't have much trouble with this one. It would be dodgy enough as a budget game, but at full price it shouldn't have come out. It stinks. **GBH**

FIRST DAY TARGET:
Stay awake

DROIDS

Mastertronic ● £1.99 cass
joystick/keys

The metallic stars of *Star Wars* the movie, the books and the cartoon series finally make it to the micro screen. R2-D2 and C-3PO have been captured by the Fromm gang and imprisoned deep within their base on the planet Auren. R2-D2 managed to open the electronic lock and it's now up to you to get the duo to the surface where rescue awaits.

SECOND OPINION
"I rather enjoyed this, though it's hardly Mastermind material – or perhaps that's why I liked it! Certainly R2 and 3PO are nicely drawn and smooth.
It's been a long wait for our metallic pals, but worth it." **SC**

GREEN SCREEN:
Colour matching is more difficult in the sub-game.

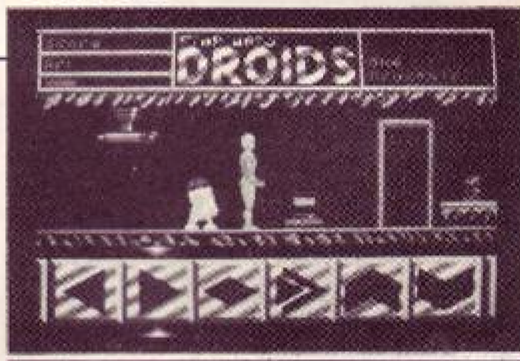
Across the bottom of the screen is a row of icons used to control the action of 3PO and R2. There are six: four control which way you move and the other two allow you to throw crystals or log-on to a computer terminal. Above the icons is the horizontally scrolling playing area with large characters of R2 and 3PO.

There are eight levels to the base and travel between levels is via lifts. Before you can use a lift you must get R2 to log-on and break the code. The code cracking stage is a sub-game in which the computer produces a series of sounds and lights. Duplicate the sequence and a longer, second sequence is your reward. Crack that and the lift is accessible to you. Computer terminals are also used to open doors that you come across on the levels. You're not alone in the base though, because there are plenty of hostile robots who deprive you of energy if you touch them – and running out of energy is fatal. They can be despatched by throwing a crystal at them.

R2-D2 and C-3PO are large, colourful smoothly moving sprites. The enemy robots are drawn well too, but the background graphics are plain. There's a jolly tune that plays on the title screen and the sound effects are good too.

This is not one of the most difficult or sophisticated games ever, but it may keep some younger players occupied for a while. It gets tedious after a few games because each level is very similar, and all you get is longer sequences of colours to match. **GBH**

FIRST DAY TARGET:
5,000 points



● R2 gets ready to log-on to a computer

The Verdict

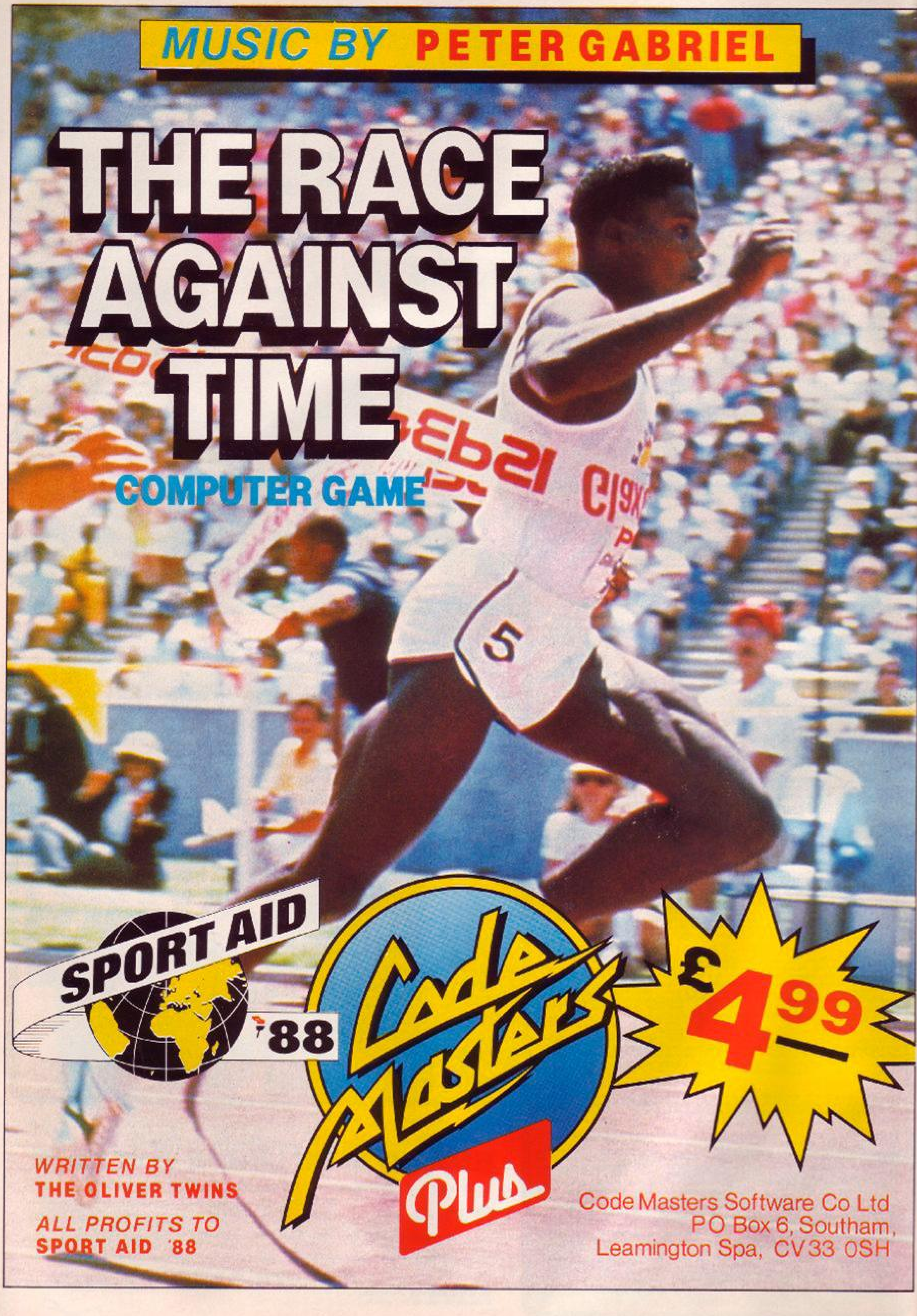
GRAPHICS 58%
- □ Large, colourful sprites.
- ■ Backgrounds could have been more detailed.

SONICS 51%
- □ Great title tune.

GRAB FACTOR 53%
- □ Exploration of the playing area is easy to begin with.
- ■ Awkward controlling the robots with icons in hazardous situations.

STAYING POWER 46%
- □ Eight levels to go through before you reach the surface.

AA RATING 56%
- ■ Sub-game is too easy to complete.
- □ A simple game that will provide entertainment for younger readers.


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SOLDERING ON

Hardware projects for your CPC

The story so far...

Last month we featured a CPC/CPC link. We continue with a couple of listings and a few ideas for future usage.

The link works by connecting two CPC's through the printer and joystick ports. The levels for these are inverted, so a row of transistors is used to translate correctly the data from one computer to another. (See *AA*35.)

Now read on...

Before I begin the programming side I'd better point out a few drawbacks to the design. For one thing it ties up both joystick ports on each machine and the printer ports. So business/games applications are limited.

Each communications channel (getting technical now) can only talk one way. This doesn't mean that data needs to be lost during transmission – but the software will have to be both methodical amd careful to get around the inherent limitations of the link.

A couple more problems: the data can only be of seven bits. Normally this is 0-127, but 0 is used to indicate no transmission, so that is unavailable for standard usage. Also the data is not buffered – the printer and joystick ports 'forget' what has been sent.

Here's the programs:

```
10 REM Transmitting program
20 REM Amstrad Action September 1988
30 a=33:z=0:y=z:x=z
40 REM in this case the data is ASCII
33
50 WHILE z <> a
60 PRINT #8,a;
70 z=JOY(0):x=JOY(1)
80 y=z AND 6:z=int(z/2):y=int(y/2):
   z=z OR y
90 z=z+x
100 WEND
```

This listing sends out character 33 – an exclamation mark – until it receives notice that it has been received. Lines 50-100 do the work: a similar fragment appears in the other listing.

Lessons learnt

This hardware project illustrates several points. The first of these is that data transmission is not the simple solder-two-leads-together-and-it-works that the ignorant believe it to be. Those transistors are vital components to invert the signals. A standard printer 'bit on' signal is 5V, whereas a joystick 'bit on' signal is 0V (what one sees as on, the other sees as off).

Take a look at the receiving listing. Noticed all those arithmetic statements? These mask off the bits from the two joystick ports and add them together. Now these follow an uncoventional pattern as follows:

D3	D2	NU	D1	NU	D0
Fire2	Fire1	Right	Left	Down	Up

● Data usage for joystick zero

NU	NU	NU	D6	D5	D4
Fire2	Fire1	Right	Left	Down	Up

● Data usage for joystick one

NU=Not used
Dn=Corresponding Data bit

So the arrangement of transmitting/receiving pins need not be logical or straightforward, so long as it works.

Finally, notice how a data value of zero is used to indicate when no data is being sent. It sounds obvious, but the concepts of a mark (data) and space (no data) are critical when understanding any communication setup.

Now it's your turn!

Have you a project? We prefer small, easy to build – and cheap! – designs but we consider everything. And we pay too;between £40-£60, according to quality and presentation.

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```
10 REM Receiving program
20 Amstrad Action September 1988
30 z=0:y=z:x=z
40 REM clear the old data and receive
more
50 WHILE (JOY(0)+JOY(1)) <> 0
60 WEND
70 z=JOY(0):x=JOY(1)
80 y=z AND 6:z=int(z/2):y=int(y/2):z=z OR y
90 z=z+x
100 PRINT #8,z;:PRINT ,chr$(z)
```

Operation of this listing is the opposite of the transmission program. It waits for a non-zero character; once received it's converted to its true form (lines 70-90) and then transmitted back to the source unit, indicating success. No check is made to ascertain that the data was not corrupted, but the kernel of transmission routines can be seen.

This isn't the sort of project that you simply build and use. The software has to do all the work, and that's the bit that you have to do – this article just tells you how the system operates. But here's a few ideas for your programs – and of course your efforts could get into *Type-Ins*. First, how about a two player game? Of course you won't be able to use joysticks, but it should be possible to get something like Battleships or Hangman.

Then there's the file swapping capability. Three inch disk availabilty makes this a bit of a waste, but remember all those 464 owners who don't have disk drives. You could take this idea to its extreme – rather than having two CPC's joined together you could have a ring network, with information leaping about from one to another up the line until it got to its destination. This would be slow in Basic, but a machine code routine would only have to work to the maximum joystick speed. Think of a kingdom style game with ten players... possibilities?

Oh, and a few extras for the interface wouldn't go amiss. As is, it's just about the cheapest design available. Lots of things could be added, such as pull up resistors to ensure cleaner transmission, opto-isolators to ensure that the machines are electrically insulated, integrated circuits for a more compact layout.

Next months *Soldering On* presents a project for a stereo amplifier to connect to your CPC.

One man band

A million hopefuls every day pick up a user's guide and say, 'I'm gonna start a software company'. But what with one thing and another... Here's a roundup of some that made it.

TOOLKIT

G. Middleton ● £14.95 ● disk only

There are an awful lot of toolkits about, generally libraries of RSX's to add a bit more clout to Basic. This one offers many of the standard extra commands, and does so at a very cheap price. It contains:

● Some sprite routines. Generally these consist of a few clever printing routines that XOR the sprite with the background. In this instance though the routines actually perform true sprite operations, cuttting out a section of memory and forcing a sprite on top of it.

● A routine to use split screen modes. Many commercial games use this feature to print one layer of the screen in one mode and another in a different one. Such routines have appeared before in *AA*, but these RSX's supplied on a disk make the operation much simpler.

● Some conventional routines – screen dumps, fill routines and so on. A 464 owner can find commands here to use *Type-Ins* for the 664/6128. And that fill command is rather special, in that two versions are available: one is lightning quick for filling simple shapes, the other takes its time doing larger, more complex areas. And you can design a fill pattern to use, rather than a solid colour.

● Similarly disk commands are beefed up and given more power. Indeed so much so that you could write a disk editor with it in simple Basic.

Your initial reaction may, like mine, be a stifled yawn and a, 'So what?' But this disk is a whole lot better than most of the competition.

AIRPORT 88/SIMPLE WORDS

Young Software Products ● £6.99 ● disk only

Two programs supplied on the same disk. The first, *Airport 88*, is a management game. Choose which airline you join, and then try to stay in the business as best you can, by specifying the destination of a flight and allocating which plane does the journey. A game aimed at the 9-and-above age range that has taken on an additional authenticity in the light of this summer's tourist problems at our major airports.

The second product, *Simple Words*, is a word-processor suitable for the novice. It is good, but it raises worries when it can be crashed simply by pressing the CLR key. The program is nowhere near as good as *Pendown* by Logotron, but bundled with the game it makes fair value. *(Price valid until October.)*

BRUSHART

Young Software Products ● £5.99 ● disk only

A cheap art package that only seems to work in Mode 0, and possessing some very crudely done features. The streetwise user can buy *Cherry Paint* for a few pounds more, and get some heavyweight artistic power. But even though it lacks the photogenic looks of the *OCP Art Studio*, it can actually do an awful lot – spraycans, rubber banding, fills etc. Young Software Products have other programs in their catalogue, obtainable on request (enclose SAE).

TAX

Adrain Pegg ● Free ● disk only

Don't be misled: *Tax* compiles an expense list for the self-employed Equity member., though users with knowledge of Basic should be able to adapt the program to their ownneeds.

Operation is simple: enter the tax year for the run, and your expenses under different headings – travel, clothing, food, fees etc. The computer makes a record, and prints a number for you to write on the back of the receipt. You can save and load the data at any time for convenience.

At the end of the year – say 1988-89 – you take a printout from the computer and the receipts down to your accountant. This means it's less of a fuss for him, so in theory you can pay him less for keeping your finances straight.

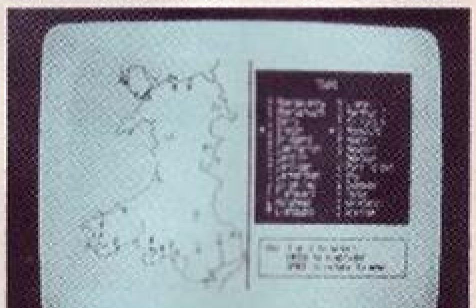
Unless you keep expense accounts it all seems rather trivial – until you try doing the same thing by hand. Send a blank disk with an SAE to Adrian Pegg: he'll help to get your expenses straight.

WALES

Lyn and Stephen Fisk ● Free ● 6128 disk only

A novel PD program, *Wales* is really a tourist's guide to that lovely country. It presents an attractive map of the place and lists entries for castles, towns, mountains, national parks and rivers.

These can be displayed singly, and require the minimum of keypresses to get working. The information is useful, and the product should be compulsory viewing for all authors of educational software, who could themselves learn a thing or two about what is possible with care and foresight.



And a major attraction, of course, is that it's free: simply send a blank disk and an SAE to the Fisks at the address below.

Contacts

- Adrian Pegg, 37 Osborne Rd, Palmers Green, London N13 5PT
- Young Software Products, 5 Harlyn Drive, Pinner, Middx HA5 2DFG
- G. Middleton, 18 Newlands Park Rd, Scarborough, N. Yorks YO12 6PX
- Lyn & Stephen Fisk, 56 Merthyr Mawr Rd, Bridgend, Mid-Glamorgan CF31 3NR

AA small ads

FOR SALE

• **CPC 464** monochrome, DK 'tronics 64K, Hisoft C, Pascal, games, MP-1 modulator, games, magazines, cassette recorder, leads, manuals, the lot £125. Also DD-1 first disk drive £80. Tel: Peter (0733) 262928.

• **Colour 464**, lightpen, Speech Synthesiser, £700 of games including Combat School, Gryzor, Matchday II, worth £1300, sell for £550 ono. Phone (0268) 693073

• **Amstrad CPC464** monochrome, two 3" disc drives, Vortex 512Kb Ram expansion, Protext, Prospell, Promerge Plus in Rombo box. Boxed Aztec 'C' Compiler, Cannon PW1080A printer, 40+ discs and manuals. £550 ono. Canss Hill 0246 368971 (Saturday only).

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• **CPC Public Domain** disk – crammed with utilities, ST style desktop, file un-erase, extended Basic, graphics, Sector Editor, loads more, only £6! D W Software, 62 Lascelles Avenue, Withernsea, HU19 2EB. (0964) 612070.

• **CPC Business Disk** – contains alphabase, a powerful command driven database and Busigraph, superb business graphics system. Full documentation included – only £8! D W Software, 62 Lascelles Avenue, Withernsea, HU19 2EB. (0964) 612070.

• **256K DK 'tronics** Silicon Disc £45.00 plus lots of software tape/disc, games/serious, all originals, cheap/ Phone Hastings (0424) 713669.

• **CPC Business Software** on disc: 'Small Traders Pack', Sales & Purchase Ledgers, Stock Control, Mailing List/Labeller, Utilities all for only £24.95. 'Sales Invoices' only £19.95 (£34.90 together). 'General Ledger' (computerised cash book) only £19.95. All fully menu-driven & Epson-compatible. Send Cheque/PO or SAE for catalogue: SD Microsystems, (Dept AA), PO Box 24, Hitchin, Herts. Phone (0462) 675106.

• **Amstrad CPC 6128** colour monitor, printer, disc software, cassette player and cassette software, joystick, listing paper, books, magazines for sale £400. Tel: Preston (Lancs) 712689 after 6pm.

• **CPC 464** colour monitor, joystick, manual, type-ins book, £160+ software, AA magazines with binder, all for £250 ono. Address: 14 Nelson Close, Biggin Hill, Kent, TN16 3LS. Tel: (0959) 74275.

• **Amstrad CPC6128** mono monitor and DMP 2000 printer. Software includes AMX Pagemaker, Commando. Cassette deck plus leads and plenty of disks and games, magazines. Must sell hence £250. Phone (0600) 5273.

• **Masterfile & Mastercalc** (464 disc) originals £15 each. 20 games (464 tape) originals, cheap. Wanted DK 'tronics 64K Ram. £25 offered. Tel: (0582) 600913 (Dunstable).

• **Microdata present** Tiny Desk Top Publisher, 5 text sizes, 4 fonts, cut & paste, graphics, patched fill, text formatting. Text from disc. Beginners A4 manual 6128 only. Just £6. Microdata, 221 Rockingham Road, Kettering NN16 9JB.

• **CPC 6128**, colour monitor, Multiface Two, printer, TV Tuner, AMX Mouse, loads of software, no offers/splitting £400. Written enquiries to: Mr Davis, 177 Downs Road, Sutton, Surrey, SM2 5QD.

• **Amstrad CPC464**, colour monitor, disk drive, Multiface II, joysticks, Speech Synthesiser with speaker, dust covers, 100+ games (tapes/disks). Great condition. Quick sale £400 ono. Tel: (0823) 275615. Buyer collects.

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WANTED

• **DD11** disk drive will pay £60, also DMP2000 printer wanted, will pay £50, also 256K memory expansion for 464 will pay £30 also Multiface II pay £10. Phone (0268) 693073.

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We also run a Disc Recovery Service recovering erased games etc. We can supply discs for £2.50. State whether 464/6128. Send SAE for FREE transfer list & games for sale. D R Hudson, 13 Cromwell Road, St Austell, Cornwall. Tel:0726 850458. Please note new address.

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This section of the magazine offers you the chance to speak directly to the huge waiting world of CPC owners – or would-be owners. Users report good results.
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TYPE-INS

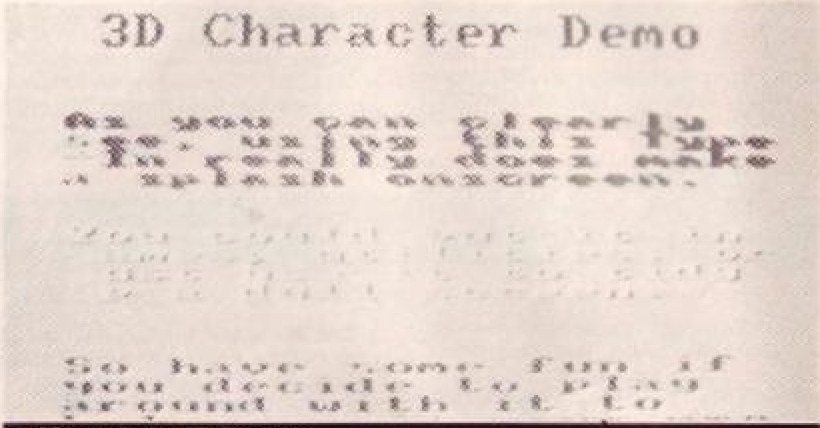
Pages packed with powerful programs

3D Characters

Now here's a program to help spice up jaded presentation. Use the RSX commands that this program sets up to produce characters with a colour edge, giving them depth. And it comes to you, oh loyal readers, from **Daren Vernon**, who lives in Harrow. To use it, store the string you want to print in a variable, such as `a$`. And include the two different colours when you invoke the command:
`|3D,@a$,1,2`

Also, use the followig variation for double height characters:
`|3D.DH,@a$,1,2`

```
1 ' 3D CHARACTERS
2 ' by Daren K. Vernon
3 ' Amstrad Action September 1988
7 '
8 ' *** Poke in machine code ***
9 '
10 RESTORE
20 addr=&A000
30 FOR x=1 TO 29
40  FOR y=1 TO 16
50   READ byte$:byte=VAL("&"+byte$)
60   POKE addr,byte:chk=chk+byte
70   addr=addr+1
80  NEXT
90  READ chksum$
100  chksum=VAL("&"+chksum$)
110  IF chk<>chksum THEN PRINT"DATA Error in line";190+(x
   *10):END
120 chksum=0:chk=0:NEXT:CALL &A000
127 '
128 ' *** Instructions / 3D char. demo ***
129 '
130 MODE 1:CALL &BC02:a$="To use the commands, type :"
140 b$="|3D,@a$,c1,c2 or |3D.DH,@a$,c1,c2"
150 c$="where a$ is the text to print, c1 is the"
160 d$="colour of the text and c2 is the colour":e$="of the
   background"
```



● 3D words for 3D *Type-Ins*

```
170 |3D,@a$,1,3:PRINT:PRINT:|3D.DH,@b$,1,3:PRINT:PRINT:PRINT
180 |3D,@c$,1,3:PRINT" ";CHR$(8);:|3D,@d$,1,3:PRINT:|3D,@e$
   ,1,3
190 DELETE 7-
197 '
198 ' *** DATA for machine code ***
199 '
200 DATA 01,0A,A0,21,C9,A1,CD,D1,BC,C9,12,A0,C3,1A,A0,C3,84B
210 DATA DB,A0,33,C4,33,44,2E,44,C8,00,FE,03,C2,86,A1,DD,7EA
220 DATA 7E,04,6F,DD,7E,05,67,22,B6,A1,DD,7E,00,32,B5,A1,714
230 DATA DD,7E,02,32,B4,A1,2A,B6,A1,7E,4F,23,56,23,5E,63,68F
240 DATA 6A,79,FE,00,C8,7E,C5,D5,E5,CD,53,A0,E1,D1,C1,23,9FC
250 DATA 0D,18,EE,C5,32,B2,A1,CD,11,BC,FE,02,28,76,32,B3,77A
260 DATA A1,21,00,00,01,00,00,11,00,00,CD,78,BB,E5,D1,26,4B0
270 DATA 00,6A,29,29,29,29,01,B3,A1,0A,FE,00,CA,C8,A0,01,59E
280 DATA 0E,00,ED,42,22,AE,A1,26,00,6B,29,29,29,29,E5,C1,589
290 DATA 21,9D,01,ED,42,22,B0,A1,ED,5B,AE,A1,2A,B0,A1,CD,840
300 DATA C0,BB,11,B5,A1,1A,CD,DE,BB,3A,B2,A1,CD,FC,BB,11,984
310 DATA B4,A1,1A,CD,90,BB,3E,01,CD,9F,BB,3A,B2,A1,CD,5D,8A4
320 DATA BB,3E,00,CD,9F,BB,C1,C9,29,01,1A,00,ED,42,22,AE,6ED
330 DATA A1,C3,87,A0,11,B2,A1,1A,C3,5A,BB,FE,03,C2,86,A1,8CB
340 DATA DD,7E,04,6F,DD,7E,05,67,22,B6,A1,DD,7E,00,32,B5,750
350 DATA A1,DD,7E,02,32,B4,A1,2A,B6,A1,7E,4F,23,56,23,5E,6CD
360 DATA 63,6A,79,FE,00,C8,7E,C5,E5,CD,12,A1,E1,C1,23,0D,886
370 DATA 18,F0,CD,A5,BB,D4,06,B9,32,C8,A1,E5,11,FE,00,21,878
380 DATA B8,A1,CD,AB,BB,E1,7E,32,B9,A1,32,B8,A1,23,7E,32,8D5
390 DATA BB,A1,32,BA,A1,23,7E,32,BD,A1,32,BC,A1,23,7E,32,77C
400 DATA BF,A1,32,BE,A1,23,7E,32,C1,A1,32,C0,A1,23,7E,32,78C
410 DATA C3,A1,32,C2,A1,23,7E,32,C5,A1,32,C4,A1,23,7E,32,79C
420 DATA C7,A1,32,C6,A1,3E,FE,CD,53,A0,3E,08,CD,5A,BB,3E,863
430 DATA 0A,CD,5A,BB,3E,FF,CD,53,A0,3E,0B,CD,5A,BB,11,C8,7ED
440 DATA A1,1A,CD,0C,B9,C9,21,95,A1,7E,FE,FF,C8,E5,CD,5A,9BC
450 DATA BB,E1,23,18,F4,45,72,72,6F,72,20,69,6E,20,70,61,6BD
460 DATA 72,61,6D,65,74,65,72,73,2E,2E,2E,2E,07,FF,62,00,583
470 DATA CD,00,45,01,03,01,76,01,FE,FE,62,62,68,68,78,78,60E
480 DATA 68,68,68,68,68,68,68,68,68,68,00,00,00,00,00,00,410
```

Here, have some money!

Send us your listings and not only do you stand a very good chance of getting in print in your favourite magazine, you could also earn yourself **£100**. Every *Type-In* we publish is paid for, and **£10** is the absolute minimum. So what are you waiting for? Send your tape or disk – and a printout if you can – to ***Type-Ins, Amstrad Action*, Future Publishing Ltd, 4 Queen St, Bath, BA1 1EJ**. And here's a few tips you may find useful:

- Send only your own original unpublished work;
- Use lower-case, not capitals, for variable names;
- REM statements make the program easier to understand;
- Don't use letters that look like numbers as variable names (O and 0, for instance, or l and 1);
- Avoid lengthy multi-statements. Short lines aid debugging;
- And ensure your name and address are on *every* piece of paper, cassette and disk you send.
- If you'd like to reach an even larger audience, declare that you are putting your contribution into the Public Domain.

Oh, and one final thing. Good luck!

Disk Sector Editor

The final, definitive machine code disk utility from **Niall Brady** from Sligo. Yes, I know we've printed similar programs before – but we still get requests for them.

This program allows you to search for programs to unerase files, to search for high scores, and generally investigate disks. A help page is included – just type CTRL-H. And, as always, ake sure that you have a back-up copy of your subject disk before exploring and altering it!

```
1 ' Disc Sector Editor ( not another one !! )
2 ' by Niall Brady
3 ' Amstrad Action September 1988
10 DATA CD,3D,93,CD,1A,94,CD,88,93,CD,40,94,CD,1A,94,CD,8E9
20 DATA 93,92,CD,E6,92,3A,2E,96,FE,01,CA,CA,90,2A,26,96,871
30 DATA CD,81,BB,CD,75,BB,CD,06,BB,CD,84,BB,FE,01,CA,07,970
40 DATA 92,FE,03,CA,9E,91,FE,07,CA,BA,91,FE,08,CA,A9,91,9B0
50 DATA FE,10,CA,E1,90,FE,12,CA,07,91,FE,13,CA,F5,90,FE,A19
60 DATA 14,CA,C5,91,FE,17,CA,D0,91,FE,F0,CA,15,91,FE,F1,AC1
70 DATA CA,2D,91,FE,F2,CA,45,91,FE,F3,CA,60,91,FE,F8,CA,B84
80 DATA 84,91,FE,F9,CA,7A,91,FE,FA,CA,8E,91,FE,FB,CA,94,C19
90 DATA 91,FE,FC,CA,F1,91,FE,30,38,8B,FE,47,30,87,CD,BD,A4E
100 DATA 93,CD,B8,93,47,CD,06,BB,FE,47,30,F9,FE,30,38,F5,949
110 DATA CD,BD,93,80,2A,2C,96,77,23,E5,F5,CD,78,BB,7C,FE,977
120 DATA 33,D4,04,94,E5,CD,0A,94,E1,F1,E5,CD,5D,BB,E1,24,990
130 DATA 22,26,96,E1,22,2C,96,C3,15,90,AF,32,2E,96,3E,06,5F4
140 DATA 32,27,96,3A,26,96,FE,14,30,07,3C,32,26,96,C3,15,530
150 DATA 90,21,05,06,22,26,96,3A,25,96,FE,01,CA,0C,90,CD,5C1
160 DATA 87,92,C3,0F,90,3E,07,CD,5A,BB,21,00,88,11,00,8A,5E6
170 DATA 01,00,02,ED,B0,18,D7,21,00,8A,11,00,88,01,00,02,3D6
180 DATA ED,B0,C3,0C,90,CD,78,BB,7D,FE,05,28,C1,2D,22,26,7DA
190 DATA 96,11,F0,FF,2A,2C,96,19,22,2C,96,18,B1,CD,78,BB,748
200 DATA 7D,FE,14,28,A9,2C,22,26,96,11,10,00,2A,2C,96,19,490
210 DATA 22,2C,96,18,99,CD,78,BB,7C,FE,07,38,91,25,25,25,64E
220 DATA 22,26,96,11,FF,FF,2A,2C,96,19,22,2C,96,C3,15,90,63E
230 DATA CD,78,BB,7C,FE,33,30,F5,24,24,24,22,26,96,11,01,62E
240 DATA 00,2A,2C,96,19,22,2C,96,18,E3,3A,24,96,FE,00,28,4FE
```

Encode/Decode

For those interested in the mechanics of encryption (the *Type-In* in AA33 was a machine code RSX, you see) we present this intriguing program from **Matthew Davey** who is an inhabitant of Kambah, Australia. It's far easier to follow.

To use it, provide the listing with the name of an Ascii file. Admittedly the program is fairly slow, to speed it up remove the last statement in lines **90** and **130**.

```
1 'Encode/Decode
2 'By Matthew Davey
3 'Amstrad Action September 1988
10 MODE 2:CAT:INPUT"name";name$
20 INPUT"0) code  or  1) decode";choice
30 IF choice<0 OR choice>1 THEN GOTO 20
40 CODEPOS=0:codekey$
  ="QWERTY":REM codekey$ can be anything
   of any length
50 OPENIN name$:OPENOUT name$
60 WHILE NOT EOF
70 LINE INPUT#9,A$:PRINT "READ--->";A$
80 FOR T=1 TO LEN(A$):B$=MID$(A$,T,1)
90  V=ASC(B$)
100 CODEPOS=CODEPOS+1:IF CODEPOS>LEN(CODEKEY$) THEN
CODEPOS=1
110 IF choice THEN GOSUB 180 ELSE GOSUB 200
120 C$=C$+CHR$(V):NEXT
130 PRINT#9,C$:PRINT "WRITE-->";C$
140  C$=""
150  WEND
160 CLOSEIN:CLOSEOUT
170 PRINT"OK!":WHILE INKEY$="":WEND:RUN
180 IF V>32 AND V-(ASC(MID$(CODEKEY$,CODEPOS,1
  ))-32)>32 THEN
   V=V-(ASC(MID$(CODEKEY$,CODEPOS,1))-32)
190 RETURN
200 IF V>32 AND V+(ASC(MID$(CODEKEY$,CODEPOS,1))-
32)>32 THEN
   V=V+(ASC(MID$(CODEKEY$,CODEPOS,1))-32)
210 RETURN
```

Variables List

For your appreciation, **Michael Gledhill** from Tavistock has produced a program which lists variabless used in Basic programs. So what? Well, this version works on all three CPC's. It adds a new RSX command, **|VAR**, so it is very easy to use. Should make a welcome addition to many a programmer's utilities box.

```
1 ' List Variables
2 ' By Michael Gledhill
3 ' Amstrad Action September 1988
5 CLS:LOCATE 1,2:PEN 1:PRINT "  Welcome back, chummy
!!!
  This  BASIC  proggy does the poking for the
  machine  code
  proggy  that'll  list  the BASIC  variables."
6 PRINT:PEN 3:PRINT " INTERESTING FACTS:
  When someone types RUN, all BASIC         variables
  are
  reset, BUT ARE NOT            ERASED FROM THE MEMO
  RY..."
7 PRINT "   When someone types  in a load  of
  rubbish
  (ie fdjddd),the computer          thinks that fdjddd
  is a
  variable."
8 PRINT
10 FOR n%=&A000 TO &A0CA:READ a$
20 POKE n%,VAL("&"+a$):NEXT:o%=40
25 CALL &A000
26 PRINT "Use |VAR to list the variables."
30 DATA 21,09,a0,01,0d,a0,c3,d1,bc,00
31 DATA 00,00,00,12,a0,c3,46,a0,56,41
32 DATA d2,00,52,65,61,6c,00,49,6e,74
33 DATA 65,67,65,72,00,53,74,72,69,6e
34 DATA 67,00,0d,0a,20,20,56,61,72,69
35 DATA 61,62,6c,65,73,3a,0a,00,11,2a
36 DATA a0,1a,b7,c8,cd,5a,bb,13,18,f7
37 DATA cd,3a,a0,21,70,01,5e,23,56,2b
38 DATA 7a,b3,28,03,19,18,f5,23,23,23
39 DATA 23,7e,b7,c8,47,cb,bf,cd,5a,bb
40 DATA 23,cb,78,28,f2,4e,06,05,3e,2e
41 DATA cd,5a,bb,10,fb,79,fe,01,20,0c
42 DATA 11,1b,a0,cd,3d,a0,11,05,00,19
43 DATA 18,2a,fe,04,20,0c,11,16,a0,cd
44 DATA 3d,a0,11,08,00,19,18,1a,fe,02
45 DATA 20,0c,11,23,a0,cd,3d,a0,11,06
46 DATA 00,19,18,0a,3e,11,cd,5a,bb,3e
47 DATA 0b,cd,5a,bb,e5,cd,78,bb,7d,fe
48 DATA 19,cc,18,bb,26,0d,cd,75,bb,3e
49 DATA 0a,cd,5a,bb,e1,2b,7e,23,b7,ca
50 DATA 5b,a0,c9
```

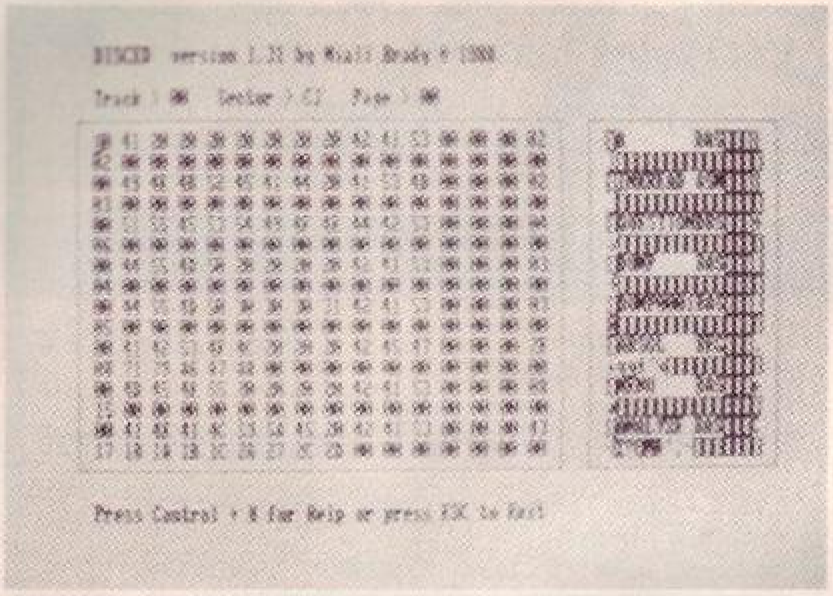
Type-Ins update

Some people – they know who they are – are having trouble with the **disk compactor** program from *AA32*. The program works – I retyped it to make sure – but it dislikes commercial protected disks. So only use it: *a)* if you're sure there are no typos and *b)* not on your fave game.

In *AA34* we published a program from **J Chan** called **Magazine Editor.** A couple of mistakes crept into it *(steps have been taken – ed.)*. Insert the following line for a conclusion to the game, and remove the gratuitous decimal point from the **re=mm** statement in line 220:

```
95 END
```

Finally, an apology to **Geraint Jones** whose **Desert Attack** appeared in *AA35*. I thought that his name was Gavin.



● Sector C1 Track 0, I presume

```
250 DATA DC,3D,18,04,3A,24,96,3C,32,24,96,C3,09,90,3A,23,50A
260 DATA 96,3D,18,04,3A,23,96,3C,32,23,96,C3,09,90,CD,47,579
270 DATA 93,11,00,80,CD,9B,BC,18,09,CD,47,93,21,03,95,CD,696
280 DATA 7F,93,CD,06,BB,CD,3D,93,18,A3,26,1C,CD,CB,93,32,797
290 DATA 23,96,C3,09,90,26,0E,CD,CB,93,32,24,96,C3,09,90,6BC
300 DATA CD,39,94,21,E8,95,CD,7F,93,CD,06,BB,FE,59,20,08,824
310 DATA 3E,85,32,28,96,CD,40,94,CD,20,94,CD,3D,93,C3,0C,741
320 DATA 90,CD,47,93,21,02,96,CD,7F,93,CD,06,BB,FE,59,20,7D4
330 DATA B4,CD,3D,93,C3,00,BB,CD,78,BB,E5,CD,00,BB,E1,E5,A02
340 DATA 24,24,22,26,96,7C,FE,36,30,37,CD,0A,94,CD,81,BB,6B1
350 DATA CD,06.BB,CD,84,BB,FE,FC,28,53,FE,7E,30,EF,FE,20,9C8
360 DATA 38,EB,CD,5A,BB,2A,2C,96,77,23,22,2C,96,E1,F5,CD,812
370 DATA 75,BB,F1,CD,9F,93,2A,26,96,24,E5,CD,75,BB,E1,18,905
380 DATA BE,D1,26,06,2C,7D,FE,15,30,05,22,26,96,18,EB,3A,5C7
390 DATA 25,96,FE,01,28,0E,CD,87,92,CD,E6,92,21,04,34,22,696
400 DATA 26,96,18,D6,CD,1A,94,CD,88,93,C3,0C,90,E1,22,26,795
410 DATA 96,CD,88,93,C3,5D,91,21,00,89,22,2C,96,3E,01,32,62E
420 DATA 25,96,C9,11,1B,00,21,56,01,CD,C0,BB,21,00,00,E5,576
430 DATA 11,90,01,CD,F9,BB,21,F2,FE,D1,D5,CD,F9,BB,E1,E5,B21
440 DATA 11,70,FE,CD,F9,BB,21,0E,01,D1,D5,CD,F9,BB,11,C2,92A
450 DATA 01,21,56,01,CD,C0,BB,E1,E5,11,9A,00,CD,F9,BB,21,7D4
460 DATA F2,FE,D1,D5,CD,F9,BB,E1,E5,11,66,FF,CD,F9,BB,21,BF5
470 DATA 0E,01,D1,C3,F9,BB,21,01,06,CD,75,BB,21,7F,94,CD,77D
480 DATA 7F,93,21,17,06,CD,75,BB,21,D3,94,CD,7F,93,21,03,6D8
490 DATA 0E,CD,75,BB,3A,24,96,CD,9F,93,21,03,1C,CD,75,BB,73B
500 DATA 3A,23,96,CD,9F,93,21,03,28,CD,75,BB,3A,25,96,CD,6FD
510 DATA 9F,93,ED,5B,2C,96,06,10,2E,05,E5,C5,CD,38,93,CD,794
520 DATA 4C,93,C1,E1,2C,10,F3,C9,26,06,C3,75,BB,3E,02,CD,7A5
530 DATA 0E,BC,3E,C0,C3,08,BC,3E,40,C3,08,BC,D5,06,10,CD,70C
540 DATA 70,93,21,1D,96,CD,7F,93,D1,06,10,1A,13,FE,20,38,620
550 DATA 06,CD,5A,BB,10,F5,C9,D5,C5,CD,5D,BB,C1,D1,18,F4,9D3
560 DATA 1A,13,C5,CD,9F,93,3E,20,CD,5A,BB,C1,10,F2,C9,7E,83B
570 DATA B7,C8,23,CD,5A,BB,18,F7,0E,1A,0C,79,FE,48,C8,CD,81B
580 DATA 30,BB,47,D6,41,D6,1A,30,F1,79,CD,27,BB,18,EB,06,78B
590 DATA 02,4F,CD,B8,93,E6,0F,FE,0A,30,04,C6,30,18,02,C6,670
600 DATA 37,CD,5A,BB,79,10,EE,C9,0F,0F,0F,0F,C9,CD,5A,BB,740
610 DATA D6,30,FE,0A,D4,C8,93,C9,D6,07,C9,2E,03,CD,75,BB,8DA
620 DATA CD,81,BB,21,2F,96,06,02,CD,06,BB,FE,47,30,F9,FE,7F1
630 DATA 30,38,F5,CD,5A,BB,FE,41,38,02,D6,37,77,23,10,E8,757
640 DATA 2B,AF,ED,6F,ED,6F,47,2B,AF,ED,6F,ED,6F,CD,B8,93,983
650 DATA 80,C3,84,BB,3E,01,32,2E,96,C9,06,02,0E,39,7C,B8,603
660 DATA 61,CA,75,BB,04,04,04,0C,18,F5,21,05,06,22,26,96,48A
670 DATA 21,00,88,22,2C,96,AF,32,25,96,3C,32,66,BE,3E,84,57D
680 DATA 32,28,96,3E,FF,32,78,BE,C9,AF,32,78,BE,C3,47,93,812
690 DATA 21,05,06,22,26,96,AF,32,25,96,21,28,96,CD,D4,BC,5E2
700 DATA 22,29,96,79,32,2B,96,CD,1B,BB,FE,FC,C8,21,00,88,75B
710 DATA 22,2C,96,3A,24,96,57,1E,00,3A,23,96,4F,DF,29,96,52D
720 DATA 30,05,79,32,23,96,C9,3E,10,81,32,23,96,18,D8,44,550
730 DATA 49,53,43,45,44,20,20,76,65,72,73,69,6F,6E,20,31,4FF
740 DATA 2E,33,31,20,62,79,20,4E,69,61,6C,6C,20,42,72,61,4D2
750 DATA 64,79,20,A4,20,31,39,38,38,0D,0A,0A,20,20,20,20,33C
760 DATA 20,54,72,61,63,6B,20,3E,20,09,09,20,20,20,53,65,3BD
770 DATA 63,74,6F,72,20,3E,20,09,09,20,20,20,50,61,67,65,425
780 DATA 20,3E,00,50,72,65,73,73,20,43,6F,6E,74,72,6F,6C,56C
790 DATA 20,2B,20,48,20,66,6F,72,20,48,65,6C,70,20,6F,72,4C4
800 DATA 20,70,72,65,73,73,20,45,53,43,20,74,6F,20,45,78,528
810 DATA 69,74,00,02,50,72,65,73,73,20,5B,43,4F,4E,54,52,4ED
820 DATA 4F,4C,5D,20,2B,20,5B,6B,65,79,5D,0D,0A,0A,43,20,3E8
830 DATA 2D,20,43,61,74,20,44,69,73,63,0D,0A,50,20,2D,20,3DC
840 DATA 50,61,67,65,20,46,6C,69,70,0D,0A,54,20,2D,20,52,452
850 DATA 65,61,64,20,54,72,61,63,6B,0D,0A,F0,20,2D,20,4E,501
860 DATA 65,78,74,20,54,72,61,63,6B,0D,0A,F3,20,2D,20,4E,52B
870 DATA 65,78,74,20,53,65,63,74,6F,72,0D,0A,F1,20,2D,20,556
880 DATA 42,61,63,6B,20,54,72,61,63,6B,0D,0A,F2,20,2D,20,4FC
890 DATA 42,61,63,6B,20,53,65,63,74,6F,72,0D,0A,47,20,2D,4AC
900 DATA 20,47,6F,74,6F,20,53,65,63,74,6F,72,0D,0A,41,20,4C1
910 DATA 2D,20,41,73,63,69,69,20,49,6E,70,75,74,0D,0A,57,4D4
920 DATA 20,2D,20,57,72,69,74,65,20,53,65,63,74,6F,72,0D,515
930 DATA 0A,53,20,2D,20,53,74,6F,72,65,20,53,65,63,74,6F,4F5
940 DATA 72,0D,0A,52,20,2D,20,52,65,63,6F,76,65,72,20,53,491
```

Circles

John Dyson, who lives in Penistone, has written a program to work out some arithmetic to do with circles – surely you remember those lessons where PI figured prominently?

This program does all the tough work for you – just type in the radius and so forth and then sit back and let your Amstrad do the rest.

```
1 REM Circles
2 REM By John Dyson
3 REM Amstrad Action September 1988
10 REM MENU
20 PAPER 15:BORDER 22:PEN 2:CLS
30 LOCATE 10,1:PRINT "CIRCLES"
40 LOCATE 10,5:PRINT "1) AREA OF A CIRCLE"
50 LOCATE 10,7:PRINT "2) PERIMETER "
60 LOCATE 10,9:PRINT "3) AREA OF PART OF A CIRCLE"
70 LOCATE 10,11:PRINT "PLEASE TYPE IN A NUMBER"
80 INPUT N::IF N=1 THEN GOTO 120 ELSE 90
90 :IF N=2 THEN GOTO 190 ELSE 100
100 IF N=3 THEN GOTO 260 ELSE 80
110 REM MAIN PROGRAM
120 CLS
130 PRINT "PLEASE INPUT THE RADIUS OF YOUR CIRCLE(IN
    CENTIMETERS"
140 INPUT R
150 A=PI*R*R
160 PRINT "THE AREA OF YOUR CIRCLE IS ";A;" CM'S
    SQUARED"
170 CALL &BB18
180 GOTO 10
190 CLS
200 :PRINT "INPUT THE RADIUS OF YOUR CIRCLE":
210 INPUT R
220 P=PI*R*2
230 PRINT "THE PERIMETER OF YOUR CIRCLE IS ";P;" CM'S"
240 CALL &BB18
250 GOTO 10
260 CLS
261 PRINT "PLEASE INPUT, AS A DECIMAL THE FRACTION OF THE
CIRCLE YOU WISH TO FIND THE AREA OF"
270 INPUT F
280 PRINT "NOW PLEASE INPUT THE RADIUS OF YOUR CIRCLE"
290 INPUT R
300 A=F*PI*R*R
310 PRINT "YOUR CIRCLE HAS AN AREA OF ";A;" CM'S
    SQUARED"
311 CALL &BB18
320 GOTO 10
```

Advanced Header Reader

We usually don't do repeats (whaddya think we are, ITV?), but this program (submitted by **Edward J Reid** of Drumchaple) is a step up on the last tape header reader that got into *Type-Ins*. To use it, simply run it and then play a program tape into your CPC – which will then display such data as load address, length, and execute address of the file in question.

```
1 ' ADVANCED TAPE HEADER READER
2 ' BY EDWARD JOHN REID
3 ' AMSTRAD ACTION SEPTEMBER 1988
10 GOSUB 410
20 CLS
30 PRINT "Insert tape then press play then any key"
40 CALL &BB06
50 CALL &8000
60 bl.num=PEEK(16400):la.blo=PEEK(16401)
70 fi.typ=PEEK(16402):fi.blo=PEEK(16407)
80 bl.len=PEEK(16403)+256*PEEK(16404)
90 st.add=PEEK(16405)+256*PEEK(16406)
100 le.add=PEEK(16408)+256*PEEK(16409)
110 ex.add=PEEK(16410)+256*PEEK(16411)
120 IF fi.blo=&FF THEN fi.blo$="YES" ELSE fi.blo$="NO"
130 IF la.blo=&FF THEN la.blo$="YES" ELSE la.blo$="NO"
140 IF fi.typ=0 THEN fi.typ$="UNPROTECTED BASIC"
150 IF fi.typ=1 THEN fi.typ$="PROTECTED BASIC"
160 IF fi.typ=2 THEN fi.typ$="UNPROTECTED BINARY"
170 IF fi.typ=3 THEN fi.typ$="PROTECTED BINARY"
180 IF fi.typ=4 THEN fi.typ$="UNPROTECTED ASCII"
190 IF fi.typ=5 THEN fi.typ$="PROTECTED ASCII"
200 IF fi.typ>6 THEN fi.typ$="FUNNY TAPE FORMAT"
210 FOR loop=16384 TO 16399:byte=PEEK(loop)
220 IF byte=0 THEN loop=16400:GOTO 240
230 name$=name$+CHR$(byte)
240 NEXT loop
250 MODE 1
260 LOCATE 9,1:PRINT "Header Reader Mk1.9"
270 LOCATE 9,2:PRINT "By Edward John Reid":PRINT
280 PRINT "FILE NAME       : ";name$:PRINT
290 PRINT "FIRST BLOCK     : ";fi.blo$:PRINT
300 PRINT "LAST BLOCK      : ";la.blo$:PRINT
310 PRINT "BLOCK NUMBER   :";bl.num:PRINT
320 PRINT "FILE TYPE NO   :";fi.typ:PRINT
330 PRINT "FILE TYPE       : ";fi.typ$:PRINT
340 PRINT "START ADDRESS : &";HEX$(st.add,4):PRINT
350 PRINT "LENGHT          : &";HEX$(le.add,4):PRINT
360 PRINT "EXUC ADDRESS   : &";HEX$(ex.add,4):PRINT
370 PRINT "BLOCK LENGHT   : &";HEX$(bl.len,4):PRINT
380 LOCATE 8,25:PRINT "PRESS ANY KEY TO CONTINUE"
390 WHILE INKEY$="":WEND
400 MODE 1:GOTO 20
410 READ a$:IF a$="END" THEN RETURN
420 POKE &8000+i,VAL("&"+a$)
430 i=i+1:GOTO 410
440 DATA 3e,2c,11,40,00,21,00,40,cd,a1,bc,c9,END
```

```
950 DATA 65,63,74,6F,72,0D,0A,00,07,18,2A,2A,20,57,72,69,3F9
960 DATA 74,65,20,64,69,73,63,20,28,59,2F,4E,29,20,2A,2A,457
970 DATA 18,00,07,18,2A,2A,20,45,78,69,74,20,44,49,53,43,388
980 DATA 45,44,20,28,59,2F,4E,29,20,2A,2A,18,00,09,09,09,277
990 DATA 09,09,00,C1,00,00,00,00,00,00,00,00,00,00,00,00,0D3
1000 n=16:a=&9000:l=10:WHILE l<1000:GOSUB 1010:WEND:GOTO 1050
1010 cs=0:FOR x=1 TO n:READ v$:v=VAL("&"+v$):POKE a,v
1020 cs=cs+v:a=a+1:NEXT:READ c$:c=VAL("&"+c$)
1030 IF c<>cs THEN PRINT"Data error in line ",l:END
1040 l=l+10:RETURN
1050 INK 1,26:CALL &9000
1060 MODE 2:PRINT"Type call &9000 to run DISCED
```

Treasure Hunt

Here a rare *Type-In*, an excellent game. But let the author tell you about it for himself.

```
1 'Treasure Hunt
2 'By Benedict Garret
3 'Amstrad Action September 1988
10 ' Variables, inks, graphics.
20 MODE 0:sc=0:lev=1:scr=0
30 INK 0,11:BORDER 11
40 INK 1,24:INK 2,6:INK 3,0:INK 4,15,3
50 RANDOMIZE TIME:SYMBOL AFTER 250
60 SYMBOL 250,255,171,213,171,213,171,213,255
70 SYMBOL 251,8,8,8,28,28,62,62,127
80 SYMBOL 252,60,126,219,255,129,195,126,195
90 SYMBOL 253,0,0,60,126,219,255,126,195
100 ' Machine code ( Thanks RpM ).
110 FOR t=&BF00 TO &BF06
120 READ a$
130 POKE t,VAL("&"+a$)
140 NEXT
150 DATA cd,60,bb,32,07,bf,c9
160 ' Game preparation
170 CLS
180 LOCATE 1,1:PEN 3:PRINT"TREASURE HUNT By Ben"
```

Screen Grabber

A very useful little program from **Paul Rooney** who lives in Normanton. Simply run it, and load another program as normal. By pressing control and the spacebar the computer will save whatever is on the screen. A word to tape users though – make sure the record and play buttons are pressed before you try to grab the picture, because the tape messages are disabled.

And it doesn't work on every game. But you might be surprised by what it can copy.

```
1 'Screen Grabber
2 'Paul Rooney
3 'Amstrad Action September 1988
10 FOR T=&AFD9 TO &B01E:READ A$: POKE
T,VAL("&"+A$):NEXT
20  CALL &B000
30 DATA 06,0A,21,F6,AF,11,00,90
40 DATA cd,8c,bc,21,00,c0,11,00
50 DATA 40,01,00,c0,3e,02,cd,98
60 DATA bc,cd,8f,bc,c9,53,43,52
70 DATA 45,45,4E,2E,42,49,4E,01
80 DATA ff,81,11,0c,b0,21,27,b0
90 DATA c3,e0,bc,3e,2f,cd,1e,bb
100 DATA c8,79,fe,80,c0,3E,01,CD
110 DATA 6B,BC, 21,D9,AF,e9
```

```
190 LOCATE 1,2:PRINT STRING$(20,"=")
200 LOCATE 5,12:PRINT"Q to Quit"
210 PEN 1
220 LOCATE 2,4:PRINT"** USE JOYSTICK **"
230 LOCATE 2,14:PRINT"L to change level."
240 LOCATE 1,24:PRINT"< Any key to start >"
250 PEN 2
260 LOCATE 3,6:PRINT CHR$(240);"....move up."
```

Personal Spending

K.R. Street's accounts package works on all disk machines. Just follow these few simple steps:

● First make sure that your keyboard doesn't have CAPS LOCK on. Next run the program and enter the start month.

● Now go down the list entering your expenditure – dates, description, amount and account (just who spent it), and press return. Enter the word 'end' to force a save.

● Remember to make sure the write protect is off!

```
10 REM PERSONAL SPENDING
20 REM By K R Street
30 REM Amstrad Action September 1988
40 MODE 1:CLS
50 BORDER 1:PAPER 0:PEN 2
60 LOCATE 16,5:PRINT"ACCOUNTS":LOCATE
16,6:PRINT"========":
   LOCATE 17,6:PRINT"========"
70 PEN 2:LOCATE 13,11:PRINT"E":PEN 3:LOCATE 14,11:PRINT
   "nter new data"
80 PEN 2:LOCATE 13,15:PRINT"N":PEN 3:LOCATE 14,15:PRINT
   "ew month"
90 PEN 2:LOCATE 13,19:PRINT"R":PEN 3:LOCATE 14,19:PRINT
   "efer old month"
100 menu$=INKEY$:IF menu$="" GOTO 100
110 IF menu$="e" THEN GOTO 500
120 IF menu$="n" GOTO 750
130 IF menu$="r" THEN GOTO 170
140 GOTO 100
150 CLS
160 REM ************** REFER OLD WEEK **************
170 CLS:LOCATE 26,14:PRINT"====="
180 LOCATE 10,13:PEN 2:INPUT "ENTER MONTH NO: ",file$:
   GOSUB 910
190 LOCATE 29,1:PRINT "REFER OLD MONTH"
200 OPENIN file$
210 LET z=0:LET t=0
220 IF EOF=-1 THEN CLS:LOCATE 34,9:PRINT "NO MORE DATA":
   LOCATE 32,13:PRINT "PRESS M FOR MENU":GOTO 330
230 INPUT #9,a$,b$,c,d$,e$:PRINT #1,a$:PRINT
#2,UPPER$(b$):
   PRINT #3,"£";c:PRINT #4,UPPER$(d$):PRINT
#5,UPPER$(e$)
240 LET t=t+c
250 LET z=z+1:IF z=14 GOTO 330
260 IF EOF=-1 GOTO 270 ELSE 230
270 PRINT #3,"-------":PRINT #3,"£";t
280 PEN 3:LOCATE 6,24:PRINT"N:Next sheet"
290 PEN 3:LOCATE 26,24:PRINT"P:Print file"
300 PEN 3:LOCATE 45,24:PRINT"M:Menu"
310 PEN 3:LOCATE 57,24:PRINT "E:Enter new data"
320 CLOSEIN
330 f$=INKEY$:IF f$="" THEN GOTO 330
340 IF f$="n" GOTO 380
350 IF f$="p" GOTO 410
360 IF f$="m" GOTO 40
370 IF f$="e" THEN CLOSEIN:CLS:CLS #1:CLS #2:CLS #3:CLS #4:
   CLS #5:GOSUB 910:GOTO 530
380 CLS #1:CLS #2:CLS #3:CLS #4:CLS #5
390 GOTO 220
400 REM ******************** PRINT
FILE*********************
410 CLOSEIN:OPENIN file$
420 PRINT #8,"DATE","CHEQUE No / DESCRIPTION"," COST",
   "PAID TO","                A/K"
430 PRINT #8,"-------------------------------------------
--
   -----------------------------------"
440 INPUT #9,a$,b$,c,d$,e$
450 WIDTH 255
460 PRINT
#8,a$;TAB(14);UPPER$(b$);TAB(40);c;TAB(53);UPPER$
   (d$);TAB(78);UPPER$(e$)
470 IF EOF=0 GOTO 440 ELSE CLOSEIN:GOTO 480
480 PRINT #8,TAB(35);"------------"
490 PRINT #8,TAB(35);"TOTAL";t:GOTO 330
500 REM **************** ENTER NEW DATA ****************
510 CLS:LOCATE 26,14:PRINT"====="
520 LOCATE 10,13:PEN 2:INPUT "ENTER MONTH NO: ",file$:
   GOSUB 910
530 LOCATE 30,1:PRINT "ENTER NEW DATA"
540 CLS #1:CLS #2:CLS #3:CLS #4:CLS #5
550 OPENIN file$
560 OPENOUT "temp"
570 INPUT #9,a$,b$,c,d$,e$
580 WRITE #9,a$,b$,c,d$,e$
590 IF EOF=-1 GOTO 600 ELSE 570
600 CLOSEIN
610 INPUT #1,"",a$:IF a$="end" THEN GOTO 660 ELSE 620
620 INPUT #2,"",b$:INPUT #3,"£",c
630 INPUT #4,"",d$:INPUT #5,"",e$
640 WRITE #9,a$,b$,c,d$,e$
650 GOTO 610
660 CLOSEOUT
670 OPENIN "temp"
680 OPENOUT file$
690 INPUT #9,a$,b$,c,d$,e$
700 WRITE #9,a$,b$,c,d$,e$
710 IF EOF=-1 GOTO 720 ELSE 690
720 CLOSEOUT:CLOSEIN
730 GOSUB 910:GOTO 190
740 REM ******************** NEW MONTH
********************
750 CLS:LOCATE 13,4:PRINT"START NEW MONTH"
760 LOCATE 13,5:PRINT"==============="
770 LOCATE 18,9:PRINT"MENU"
780 LOCATE 18,10:PRINT"===="
790 LOCATE 27,16:PRINT"====="
800 LOCATE 8,15:PEN 2:INPUT "ENTER NEW MONTH NO:",file$
810 GOSUB 910:LOCATE 32,1:PRINT "NEW MONTH"
820 OPENOUT file$
830 INPUT #1,"",a$:IF a$="end" THEN GOTO 880 ELSE 840
840 INPUT #2,"",b$:INPUT #3,"£",c
850 INPUT #4,"",d$:INPUT #5,"",e$
860 WRITE #9,a$,b$,c,d$,e$
870 GOTO 830
880 CLOSEOUT
890 CLS #1:CLS #2:CLS #3:CLS #4:CLS #5
900 GOTO 200
910 REM *************** DISPLAY SHEET ****************
920 CLS:MODE 2:PEN 1:PAPER 0:BORDER 1
930 MOVE 2,340:DRAWR 610,0:DRAWR 0,-295:DRAWR -
610,0:DRAWR
   0,295
940 MOVE 2,315:DRAWR 610,0:MOVE 85,340:DRAWR 0,-295
950 MOVE 320,340:DRAWR 0,-295:MOVE 410,340:DRAWR 0,-295
960 MOVE 580,340:DRAWR 0,-295:WINDOW #1,2,10,7,22
970 PAPER #1,0:CLS #1:WINDOW #2,13,38,7,22
980 PAPER #2,0:CLS #2:WINDOW #3,42,51,7,22
990 PAPER #3,0:CLS #3:WINDOW #4,53,70,7,22
1000 PAPER #4,0:CLS #4:WINDOW #5,74,76,7,22
1010 PAPER #5,0:CLS #5
1020 LOCATE 30,3:PRINT"MONTH NO:":LOCATE 39,3:PRINT file$:
   LOCATE 2,5:PRINT"DATE":LOCATE 13,5:PRINT"CHEQUE No
   / DISCRIPTION"
1030 LOCATE 42,5:PRINT"COST":LOCATE 53,5:PRINT"PAID TO":
   LOCATE 74,5:PRINT"A/K":RETURN
```

Personal Spending

K.R. Street's accounts package works on all disk machines. Just follow these few simple steps:

- First make sure that your keyboard doesn't have **CAPS LOCK** on. Next run the program and enter the start month.
- Now go down the list entering your expenditure – for which the dates, description, amount and account (just who spent it), and press return. Enter the word 'end' to force a save.
- Remember to make sure that the write protect is off!

```
10 REM PERSONAL SPENDING
20 REM By K R Street
30 REM Amstrad Action September 1988
40 MODE 1:CLS
50 BORDER 1:PAPER 0:PEN 2
60 LOCATE 16,5:PRINT"ACCOUNTS":LOCATE
16,6:PRINT"========":
   LOCATE 17,6:PRINT"======="
70 PEN 2:LOCATE 13,11:PRINT"E":PEN 3:LOCATE 14,11:PRINT
   "nter new data"
80 PEN 2:LOCATE 13,15:PRINT"N":PEN 3:LOCATE 14,15:PRINT
   "ew month"
90 PEN 2:LOCATE 13,19:PRINT"R":PEN 3:LOCATE 14,19:PRINT
   "efer old month"
100 menu$=INKEY$:IF menu$=" "GOTO 100
110 IF menu$="e" THEN GOTO 500
120 IF menu$="n" GOTO 750
130 IF menu$="r" THEN GOTO 170
140 GOTO 100
150 CLS
160 REM ************** REFER OLD WEEK **************
170 CLS:LOCATE 26,14:PRINT"====="
180 LOCATE 10,13:PEN 2:INPUT "ENTER MONTH NO: ",file$:
    GOSUB 910
190 LOCATE 29,1:PRINT "REFER OLD MONTH"
200 OPENIN file$
210 LET z=0:LET t=0
220 IF EOF=-1 THEN CLS:LOCATE 34,9:PRINT "NO MORE DATA":
    LOCATE 32,13:PRINT "PRESS M FOR MENU":GOTO 330
230 INPUT #9,a$,b$,c,d$,e$:PRINT #1,a$:PRINT
#2,UPPER$(b$):
    PRINT #3,"£":c:PRINT #4,UPPER$(d$):PRINT
#5,UPPER$(e$)
240 LET t=t+c
250 LET z=z+1:IF z=14 GOTO 330
260 IF EOF=-1 GOTO 270 ELSE 230
270 PRINT #3,"-------":PRINT #3,"£";t
280 PEN 3:LOCATE 6,24:PRINT"N:Next sheet"
290 PEN 3:LOCATE 26,24:PRINT"P:Print file"
300 PEN 3:LOCATE 45,24:PRINT"M:Menu"
310 PEN 3:LOCATE 57,24:PRINT "E:Enter new data"
320 CLOSEIN
330 f$=INKEY$:IF f$="" THEN GOTO 330
340 IF f$="n" GOTO 380
350 IF f$="p" GOTO 410
360 IF f$="m" GOTO 40
370 IF f$="e" THEN CLOSEIN:CLS:CLS #1:CLS #2:CLS #3:CLS #4:
    CLS #5:GOSUB 910:GOTO 530
380 CLS #1:CLS #2:CLS #3:CLS #4:CLS #5
390 GOTO 220
400 REM ******************** PRINT
FILE********************
410 CLOSEIN:OPENIN file$
420 PRINT #8,"DATE","CHEQUE No / DESCRIPTION"," COST",
    "PAID TO","             A/K"
430 PRINT #8,"-----------------------------------------
--
    -----------------------------------"
440 INPUT #9,a$,b$,c,d$,e$
450 WIDTH 255
460 PRINT
#8,a$;TAB(14);UPPER$(b$);TAB(40);c;TAB(53);UPPER$
    (d$);TAB(78);UPPER$(e$)
470 IF EOF=0 GOTO 440 ELSE CLOSEIN:GOTO 480
480 PRINT #8,TAB(35);"------------"
490 PRINT #8,TAB(35);"TOTAL";t:GOTO 330
500 REM **************** ENTER NEW DATA ****************
510 CLS:LOCATE 26,14:PRINT"====="
520 LOCATE 10,13:PEN 2:INPUT "ENTER MONTH NO: ",file$:
    GOSUB 910
530 LOCATE 30,1:PRINT "ENTER NEW DATA"
540 CLS #1:CLS #2:CLS #3:CLS #4:CLS #5
550 OPENIN file$
560 OPENOUT "temp"
570 INPUT #9,a$,b$,c,d$,e$
580 WRITE #9,a$,b$,c,d$,e$
590 IF EOF=-1 GOTO 600 ELSE 570
600 CLOSEIN
610 INPUT #1,"",a$:IF a$="end" THEN GOTO 660 ELSE 620
620 INPUT #2,"",b$:INPUT #3,"£",c
630 INPUT #4,"",d$:INPUT #5,"",e$
640 WRITE #9,a$,b$,c,d$,e$
650 GOTO 610
660 CLOSEOUT
670 OPENIN "temp"
680 OPENOUT file$
690 INPUT #9,a$,b$,c,d$,e$
700 WRITE #9,a$,b$,c,d$,e$
710 IF EOF=-1 GOTO 720 ELSE 690
720 CLOSEOUT:CLOSEIN
730 GOSUB 910:GOTO 190
740 REM ******************** NEW MONTH
********************
750 CLS:LOCATE 13,4:PRINT"START NEW MONTH"
760 LOCATE 13,5:PRINT"==============="
770 LOCATE 18,9:PRINT"MENU"
780 LOCATE 18,10:PRINT"===="
790 LOCATE 27,16:PRINT"====="
800 LOCATE 8,15:PEN 2:INPUT "ENTER NEW MONTH NO:",file$
810 GOSUB 910:LOCATE 32,1:PRINT "NEW MONTH"
820 OPENOUT file$
830 INPUT #1,"",a$:IF a$="end" THEN GOTO 880 ELSE 840
840 INPUT #2,"",b$:INPUT #3,"£",c
850 INPUT #4,"",d$:INPUT #5,"",e$
860 WRITE #9,a$,b$,c,d$,e$
870 GOTO 830
880 CLOSEOUT
890 CLS #1:CLS #2:CLS #3:CLS #4:CLS #5
900 GOTO 200
910 REM *************** DISPLAY SHEET ****************
920 CLS:MODE 2:PEN 1:PAPER 0:BORDER 1
930 MOVE 2,340:DRAWR 610,0:DRAWR 0,-295:DRAWR -
610,0:DRAWR
    0,295
940 MOVE 2,315:DRAWR 610,0:MOVE 85,340:DRAWR 0,-295
950 MOVE 320,340:DRAWR 0,-295:MOVE 410,340:DRAWR 0,-295
960 MOVE 580,340:DRAWR 0,-295:WINDOW #1,2,10,7,22
970 PAPER #1,0:CLS #1:WINDOW #2,13,38,7,22
980 PAPER #2,0:CLS #2:WINDOW #3,42,51,7,22
990 PAPER #3,0:CLS #3:WINDOW #4,53,70,7,22
1000 PAPER #4,0:CLS #4:WINDOW #5,74,76,7,22
1010 PAPER #5,0:CLS #5
1020 LOCATE 30,3:PRINT"MONTH NO:":LOCATE 39,3:PRINT file$:
     LOCATE 2,5:PRINT"DATE":LOCATE 13,5:PRINT"CHEQUE No
     / DISCRIPTION"
1030 LOCATE 42,5:PRINT"COST":LOCATE 53,5:PRINT"PAID TO":
     LOCATE 74,5:PRINT"A/K":RETURN
```

THE PILGRIM

All the Amstrad adventurer needs

Return to Doom

Topologika ● £12.95 ● disk only

'We wouldn't claim', begins the press release from Topologika concerning *Return to Doom*, that the release of a new adventure game from the pen of Peter Killworth is earth-shattering news...'. The Pilg certainly can't contradict them on that point, but at a time when we are besieged by hi-tech ad-ventures from Magnetic Scrolls and Level 9, playing *RTD* was far more enjoyable than I expected. If you have an urge to go back in time and play a real old-fashioned text adventure, this game should satisfy it.

To start with, long-lived Pilgs may remember my taking Mr Killworth to task for leaving out the EXAMINE command in his adventure *Countdown to Doom* and sticking to a hopelessly outdated parser. Mr K wrote in to the column (see *AA27*) stoutly defending his position and in this latest game he has stuck by his guns... so there's still no EXAMINE, and still a very ancient system.

The plot is pretty straightforward. The planet Doom is playing host to an unwilling party of politicians who have crash landed on its surface and been kidnapped by some runaway robots. Defying Newtonian physics, you pop over to the planet in the time it takes to load up the game and attempt to rescue the survivors.



RTD is disk only and does a fair bit of disk accessing during play. The text-only display flags the name of your current location and your score at the top of the screen, and below prints out descriptions in either VERBOSE or NORMAL mode. This is something of an improvement on earlier Killworth games, but unfortunately it misses the mark. In *RTD*, VERBOSE prints a lengthy description every time, and NORMAL does so only on your first visit to a location. What's lacking is a BRIEF command, which *always* prints brief descriptions - the whole point being that when you have played the game several times you want to be able to move through it faster to get to the right point. And believe me, you'll be RESTARTing this game fairly often.

Helping hand

Other obvious improvements include the provision of on-line help. The cassette inlay comes with a list of 88 numbered hints, and typing HELP during play prompts you for a number. Enter the number and you'll receive a series of hints concerning the relevant problem, culminating (if you want it) in the final solution. Whatever its other drawbacks, RTD can now claim to have the best on-line help facility of any game I've seen.

You can also string together multiple commands using AND, THEN, or simply commas. Again, this can save time when you know what you're doing. Saving to disk is fairly quick, but there is no RAMSAVE and no ability to catalogue your saved filenames while playing – both features it would be nice to see included.

It's debatable whether the excellent on-line help is really such a good thing, however, and that brings to me the game itself. If ever there was a program that relied on puzzling, this is it. From the very first screen you are confronted with a host of puzzles that prevent you from moving more than a couple of locations in any direction. If you're not chomped to death, squeezed to death, torn to death, or spiked to death, you're extremely lucky.

The puzzles are bad enough at the beginning, but after you've progressed a while they become positively devilish. It's at this point that the on-line help begins to exert a very unhealthy influence and unless you have a will cast from titanium you'll find yourself resorting to it more often than is good for you. If you can't resist, you might as well throw the game away - because puzzling is what it's all about. The lure of the adventure is definitely of the 'I wonder how I can do that' variety, and not of the 'Wow! Here I am in another world' type. Thought, not fantasy, is the name of the game.

Unfortunately, some of the frustration is not entirely enjoyable. To start with, the parser really is rather primitive and can actually mislead the player on occasions. There are certain puzzles which you can solve intuitively, but then be misled by the parser into

Dr Jekyll and Mr Hyde
– A Gothic Nightmare

PILGRIM PREVIEW

The Essential Myth ● £12.95 ● Disk only

This latest game from The Essential Myth should be available in the next couple of weeks. The Pilg has seen a Spectrum version which, sadly, failed to load, but we'll review it on the CPC next month. Messrs Hodgson and friends, founders of this long-established small mail-order software house, have certainly hit on a good idea for a game...

The program is in three parts, called Dichotomies, Duality, and Denouement. It's a text-and-graphics adventure produced using the PAW and the company defend the high price of the package by saying that: 'Although we primarily used a utility to write the game, we feel that the pricing structure decided for the program is justified. The game took 6 months to write and test, and due to the limitations of PAW quite a lot of the game had to be programmed outside of the utility'.

The boys have certainly packed in a few useful features. The game features MEMSAVE (i.e. to RAM), as well as disk and tape load/save options. You can address other characters using the SAY TO name 'MESSAGE' format as well as ASK name ABOUT and TALK TO name ABOUT constructs. Interestingly, when you are asked a direct question by a character, the prompt and cursor change to an open and closed quotes to save typing for your reply.

Multiple commands are also possible, together with use of pronouns. Finally, you get the useful OOPS command.

It's also worth mentioning that Essential Myth are on the look-out for programs suitable for publication. They stress that they will accept GACed games only under exceptional circumstances, preferring PAWed adventures or those written using you own system. Originality is, of course, essential. Their address is:

The Essential Myth, 54 Church Street, Tewkesbury, Glos, GL20 5RZ

Watch out for the review next month and discover whether that £12.95 is really justified!

thinking you have got the wrong approach. To open a door, for example, you naturally try to KNOCK ON DOOR, but the program won't accept this and definitely gives the impression that this is the input of a misguided adventurer. It's a bit annoying to discover (after resorting to the on-line help, of course) that the required input is simply KNOCK. That's what I was doing! This happens on a number of different occasions...

There is an enormous diversity of locations, puzzles, and dangers in this game. FrequentSAVEs will be necessary and it will take a while to solve (without the help). It also introduces a small measure of interaction with a character not unlike the Dagget in *Worm in Paradise*. Despite the primitive nature of the programming and presentation, it's a very enjoyable game that should challenge dedicated puzzlers anywhere. Unfortunately, for a game full of tricky problems, the biggest problem is the price.

ATMOSPHERE	65%	INTERACTION	58%
CHALLENGE	85%	OVERALL	70%

Next month....

The new-look Pilg column continues, with heaps more tips, letters, reviews, and news of adventuring. We'll also be quizzing the software houses to discover what's on the menu for the next few months for Arnold adventurers.

Rigel's Revenge not so deadly

Nigel Brooks, one of the creators of *Rigel's Revenge*, has telephoned us to help clear up problems encountered by those who have bugged copies of the game.

Apparently Mastertronic have (and have had for some time) debugged versions of the adventure. Unfortunately, these versions are not distinguishable from the outside from the ones with the bugs! If you have a bugged version, Nigel suggests that the only solution is to send your copy to Mastertronic for a replacement. Their address should be on the packaging for the game.

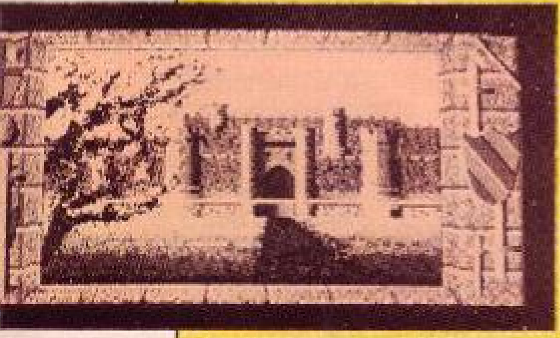
Lancelot launch

Level 9's long-awaited adventure based on the Arthurian legends is to be launched in early September and should be available as you read this. It costs £14.95, is published via Mandarin (who did *Time and Magic)* and is available for both CPC and PCW machines. All versions include a background story and a parchment map of Arthurian England.

This game is vital for Level 9's continuing reputation as a major-league adventure house. Despite their innovations in programming, particularly where characters are concerned, the plots of their recent games - *Knight Orc* and *Gnome Ranger* – have been slightly below par for the course.

Lancelot is important because it could show Level 9 going back to what they do best - myth-making. Their old Middle Earth titles established a strong reputation for the company, and deservedly so. Now they have a vastly improved system. All they need is a game that is worthy of it.

The game comes in three separate parts, each a mini-adventure in its own right. The company claim that there are over 60,000 words of text, plus high quality graphics, and a sneak preview at screenshots on the 16-bit versions certainly seems to confirm the latter.



● *Lancelot* in 16 bit – but how will the conversion look?

The legends of King Arthur and his Knights of the Round Table are known to all', says Pete Austin, 'but it is a sad fact that most modern interpretations seem to owe nothing to the original tales'. Let's hope they put all that right.

Contact The Pilg

The Pilg is always delighted to hear from readers, and although he can't answer personally he always considers publishing letters of interest to adventurers on these pages. To have your say on any aspect of, or related to, adventuring, write to:
***The Pilgrim, Amstrad Action*, 4 Queen Street, Bath**

Ingrid's back – but..!

As well as launching *Lancelot* through Mandarin, Level 9 are keeping their hand in by releasing a sequel to *Gnome Ranger* themselves.

Called *Gnome II: Ingrid's Back*, the game features the infuriating Ingrid Bottomlow as she horrifies the inhabitants of her home town of Little Moaning. She seeks fame and fortune by attempting to put a stop to the development plans of Jasper Quickbuck, lord of Ridley's Manor, which threaten 'this quiet corner of the gnome belt'.

Level 9 have often introduced political themes into their games – such as the totalitarian state in *Worm in Paradise* – but they tend to be rather hesitant about it. Perhaps the Austins should produce the first *really* political adventure and introduce a few Bennites instead of all these gnomes.

Meanwhile, 464 owners can gnash their teeth. The game is on disk only for the CPC's. Shame on you, Level 9!



● Ingrid's back (geddit?)

Role playing to pass us by?

It was great to get *The Bard's Tale*, wasn't it?

What isn't so great is that we may not be getting many more fantasy RPG's on the Amstrads. Since *BT* the 16-bit market has been basking in the sun with its copies of *Wasteland* (a new RPG from the BT team), *BT 2* and *3*, *Questron II*, *Might and Magic*, and a whole load more – with *Dungeons and Dragons* to come!

The question, however, is just how many of these games are going to turn up on the Amstrad? Not many, but next month we publish another of our 'state of play' reports for Arnold adventurers, so you can catch up on what to expect in the next 12 months.

Don't miss it!



The lords and ladies of adventure

Forest at Worlds End, Gremlins, Heroes of Karn, Midnshadow, Message from Andromeda, Never Ending Story, Red Hawk, Spy Trek, Seabase Delta, SubSunk, Warlord, Spellbound, Knight Tyme, Storm Bringer.
Robert Weir, 87 Burnside Rd, Gorebridge, Midlothian, EH23 4ET

Beerhunter, Heroes of Karn, Never Ending Story, plus limited help on Redhawk and Rigels Revenge.
Andrew MacDonald, Brookhouse Farm, Eccleshall, Staffs, ST21 6NE

Kentilla, The Big Sleaze, Hobbit, Forest at the Worlds End
David Liddell, 91 Orbiston Drive, Bellshill, ML4 2LX

Star Wreck, Lurking Horror, Pawn, Khobyashi Naru, Gems of Stradus, Forest at Worlds End, Jewels of Babylon, Message from Andromeda, Heroes of Karn, Aftershock, Warlord, Red Moon, Snowball, Dungeon Adventure, Adventure Quest, Hobbit, Necris Dome, Souls of Darkon, Lords of Time, Theseus, Robin of Sherlock, Bugsy, Mordens Quest, Questprobe III, Very Big Cave Adventure, Boggit, Dodgy Geezers, Redhawk, Sorcerer, Hitchhikers Guide, Nythyhel,
Brawn Free, Arnold Blackwood Trilogy, Fantasia Diamond, Espionage Island, Mindshadow, Inca Curse, Bored of the Rings, Emerald Isle, Spytrek, SubSunk, Hunchback, Seabase Delta, Never Ending Story, Knight Tyme, Kentilla, Apache gold, Escape From Khosima, Circus, Sphinx Adventure, Gremlins, Clasic Adventure, Dungeons Amethysts, Alchemists 'n' Everything, Beer Hunter, Zork 1, Dracula, Colossal Adventure, Tomb of Kuslak, The Mural, Rebel Planet, The Forth Protocol, Enchanter, Lord of the Rings Pt 2.
Darren Stephens, 0795 73490

Seastalker, Hitchhikers Guide to the Galaxy, Lurking Horror, Leather Goddesses of Phobos, Souls of Darkon, Red Moon, SubSunk, Kaiser, Seabase Delta, Warlord, Heroes of Karn, Message from Andromeda, Forest at the Worlds End, Classic Adventure, Worm in Paradise, DAA'n'Everything, Price of Magik, Return to Eden, Fantasia Diamond, Wildbunch and Experience.
(Penpals also wanted).
Stuart Whyte, 53 Ridgeway Road, The Gables, Timperley, Altrincham, Cheshire, WA15 7HL

Adventure Quest, Aftershock, Apache Gold, Arnold Goes to Somewhere Else, Boggit, Bored of the Rings, Brawn Free, Castle Blackstar, Castle of Skull Lord, Classic Adventure, Colossal Adventure, Colour of Magic, Crystal Theft, Dodgy Geezers, Dracula, Dungeon Adventure, Dungeons A A n Everything, Espionage Island, Fantasia Diamond, Forest at the Worlds End, Gnome Ranger, Heavy on the Magic, Heroes of Karn, Hitchhikers Guide, Hobbit, Hunchback, Imagination, Inca Curse, Jewels of Babylon, Kentilla, Kobyashi Naru, Lords of Time, Message from Andromeda, Mindshadow, Mordon's Quest, Necris Dome, Never Ending Story, Pawn, Planet of Death, Price of Magik, Project Volcano, Qor, Questprobe III, Red Moon, Return to Eden, Robocide, Seabase Delta, Seas of Blood, Shymer, Smugglers Cove, Snowball, Sorcerer, Souls of Darkon, Spellbreaker, Spytrek, Star Wreck, Subsunk, Sydney Affair, Terrormolinos, The Trial of Arnold Blackwood, Vera Cruz Affair, Very Big Cave Adventure, Warlord, Wise and Fool of Blackwood, Worm in Paradise, Zork I.
Joan Pancott, 78 Radipole Lane, Weymouth, Dorset, DT4 9RS
☎ 0305 784155 any day noon to 10pm only.

Pilgrim post

Just space for a letter from Joan Pancott, which naturally warmed the cockles of the Pilgy's heart, plus a couple of other brief missives from dearly beloved readers...

Well Done Pilgy

Congratulations on bringing back the old style Adventure Column with clues, readers' letters, and the Lords and Ladies. Not only have I enjoyed reading it, but it will mean an end to the complaints that I have had to listen to over the last few months when we have had or or two of the above mentioned, but not all three. The complaints have come from people ringing me for adventure help and some of them think that because I offer help through *AA*, I am an employee and in some way responsible for the content of the column. I have put them straight on that point, but I would like all of your readers to know that if my name does not appear on the *Lords and Ladies* it is because I have not sent in my list, not because I have stopped giving help.

My very best wishes to all at *AA* and fellow adventurers here and overseas.
Joan Pancott, Weymouth.

It's always difficult to fit EVERYTHING into four pages! What we've tried to do is give readers some variety - with the programming, market survey, previews, and so on. From now on we will be giving you a little bit of every - thing – I hope you approve!

Grrrr!

I am writing to complain about 6128 only games (e.g. *Corruption, Jinxter*). I think it is unfair to us 464 and 664 owners who can't get these games!

Is it not possible for companies to make a revised edition for all us poor pilgs?
Michael Dickinson, Atherton

It's certainly a problem, Michael. The trouble is that adventure software is slowly changing – disk-based games are becoming more common, and programmers are putting more into their games in the way of text, graphics, and icons. All this requires more memory – it's not just the disk operating system of the 6128 that programmers are making use of, but also the extra RAM. The Pilg continues to do his best to persuade companies to release 464 (and 6128 versions) of their games, but it's an uphill task.

I'll Help!

In the August issue you replied to a letter from Mr Neary complaining about the lack of reviews of home-grown and mail-order adventures. You stated in your reply that unfortunately you did not have the time to review these products.

I would therefore like to offer my services, should you be interested...
William Bailey, Hatfield

Thanks for the offer, William. With the growing absence of major league games for Amstrad adventurers, the role of smaller companies is obviously growing in importance. And due to other developments I am no longer as busy as I was.

This means a return to the old-style Pilgrim column, and a better deal for all (including me).

If ever I need help, I'll call – but in the meantime, please could smaller companies continue to keep me updated on their operations?

Adventure program

Everyone who wrote in for a copy of the adventure listing should now have received their programs. So next month we can get back to printing routines for you to add into your games. Don't miss it!

Clue sniffing with the Pilgrim

This is the only true clue pot for people in sticky situations. Accept no imitations. None genuine without this signature...

Note well these names:

William J Bailey, Worcester
Jason Ruffel, Bexley Heath
Andre Nieuwenhuize, New Zealand

These Honorary Pilgs have earned everlasting gratitude for sending in their tips for this month's *Clue Pot*. You too can help fellow adventurers out of their misery, as well as having the satisfaction of seeing your name in print and published around the world...

***KNIGHT ORC* CLUE CAULDRON!**

A bumper load of tips for this Level 9 teaser from Andre Nieuwenhuize, New Zealand. Never have so many owed so much to someone from so far away!

To get the **troll's wallet**:
Go to bridge, cast eye, fireball
Eye, "wait 2, open bolt"
Fireball, "wait 1, open bolt"
Open door, N, Get wallet

...and don't forget to answer NO to the troll's question.

To get the **silver ring**, get the eye and the fireball to help pull up the slimey rope on the troll toll bridge.

Put the ring in the hot fire to learn the EXORCISE spell.

To learn the **FLY** spell, find driftwood lump, cast exorcise at lump, examine lump.

Cast fly at statue, examine statue, to learn the SHIELD spell.

STATIONFALL

The form to open the iris door to the village can be found in the dustbin on level 7. To authorise it, use the stamp found under the station commander's bed. The form is too crumpled to go in the slot, so take it to the laundry on level 3...

In Shady Dan's rocket is a machine that gives you a higher rank if you place your ID Card in it. Turn it on and press No 7. This gives the card the rank of commander and lets you open the security doors.

The gun found in the armoury can be used to destroy welders, but it has limited shots.

To learn the **SWORD** spell, go to the dead end by the smelly kitchen and cast jump west.

Cast shield at me will allow you to enter the castle and cast fly at me to fly above the acid pool. Cast sword and press button with broadsword to open the door.

Examine the dagger found in the prison cell to get the **TELEPORT** spell.

To open the booby-trapped door you must be wearing the rusty armour and the ball and chain.

To get the **reprogrammer**:

Load HORDES OF THE MOUNTAIN KING.
Get yourself killed.
Whilst sitting in the cloud, open door.
Now remove visor.
The metal door will be open, so go east.

Once you have the reprogrammer, you can recruit the dragon, troll, and mouse.

Enter the tomb with the garlic, then wait for someone to come.

Cast the cold spell at the fire and examine the grate.

Enter the bedroom, close the door, and try to get the mouse. If he escapes, fill up his escape hole by putting something in it. When the mouse has nowhere to go, drop the floursack.

SPELLBREAKER

Look in the zipper.

To get the cube in the hermit's hut, cashly the hut so the cube is no longer needed and the hermit lets you take it.

The blue carpet can be bought for 500 zorkmids or the opal if you bargain.

Cashly the moldy book so you can read and copy the spell.

Write different names on the cubes so you can tell them apart.

Cast the knives spell at the overhanging ropes.

Cast the slow spell at the mouse. The dragon hates mice!

Find anthill, cast eye spell and command the eye to kill the ants, then start killing them yourself until you can take the disk.

Give the rat pie to Grok to get the map.

Find the apple tree, command the eye to wait 1 and catch the apple, then type 'shake tree'.

To clean the plaque, cast eye, command eye to wait 1 and wipe plaque, then wipe plaque yourself.

SCARY TALES

To find a coin, dig a hole in the garden using a spade.

Plant the beans in the garden, then fill a bucket with water from the well on the hill and water the sprout.

To kill the giant, tie his shoelaces together.

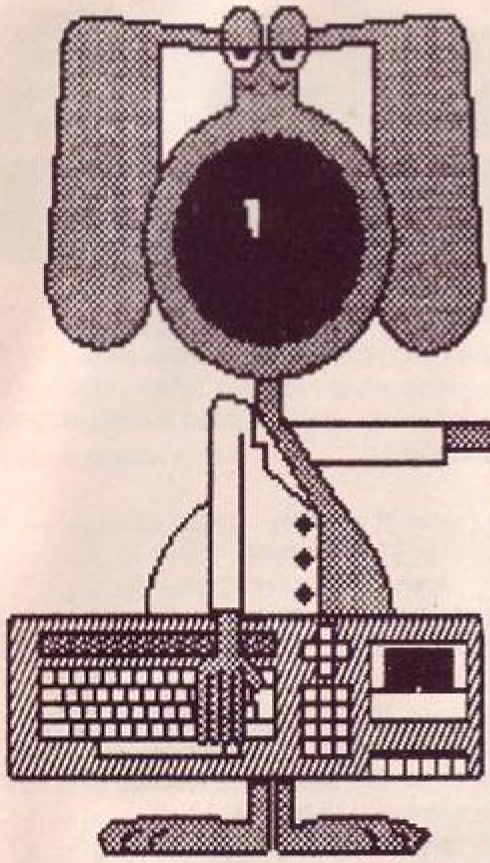
To release the old granny, give her a currant cake. When she offers you a gift, give her the golden egg.

To get past the forcefield you need a talisman, go to the seven dwarves cottage, examine the covers and move covers.

Wear a wig and padded brassiere in the tower(!)

Do not wander around the garden.

NB If you have a 6128 Amstrad, you can save your position on disk by typing SAVE then D.



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Arnor C (CP/M+)	£39.00	–
Micro Music Creator	£11.95	£19.95

VIDI-CPC Digitiser	£68.00

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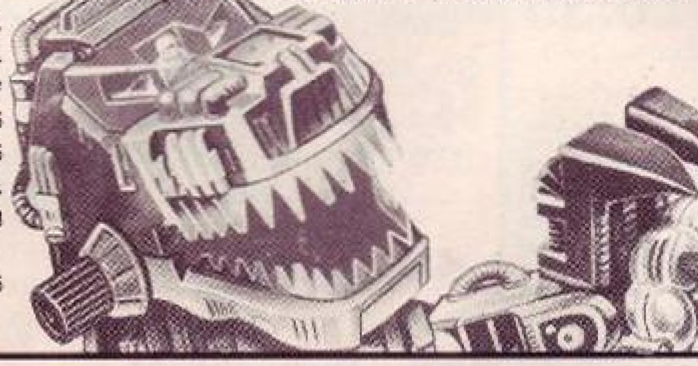
CHEAT MODE

The best tips, pokes and ploys to make life easier

Zoids

Mike Wong of Sale pokes Martech's game to give you invulnerability and a choice of which Zoid to start the game in. **(Method 1)**

```
1 ' Zoids - tape
2 ' by Mike Wong
3 ' Amstrad Action Sept 88
1Ø DATA 3e,ØØ,32,5a
2Ø DATA 2d,af,67,6f
3Ø DATA 32,de,4f,22
4Ø DATA df,4f,32,a4
5Ø DATA 4a,22,a5,4a
6Ø DATA 32,ee,62,32
7Ø DATA 83,5Ø,c3,Ø3
8Ø DATA 2d
9Ø DATA 21,4Ø,2Ø,11
1ØØ DATA 4Ø,ØØ,Ø1,37
11Ø DATA Ø2,ed,bØ,21
12Ø DATA 74,Ø2,36,Øf
13Ø DATA 23,36,85,21
14Ø DATA 4Ø,ØØ,e5,21
15Ø DATA ØØ,bb,e5,21
16Ø DATA 37,Ø2,e5,**
17Ø DATA 21,Ø7,b8,e5
18Ø DATA 21,bb,Ø2,e5
19Ø DATA f1,21,ea,b1
2ØØ DATA 11,d9,b1,f3
21Ø DATA c9,*
22Ø DATA 21,1f,b1,e5
23Ø DATA 21,bb,Ø2,e5
24Ø DATA f1,21,e5,b7
25Ø DATA 11,d4,b7,f3
26Ø DATA c9,*
27Ø MEMORY &2ØØØ:n=&BEØØ
28Ø READ a$
29Ø IF a$="**" THEN 34Ø
3ØØ IF a$="*" THEN 36Ø
31Ø a=VAL("&"+a$)
32Ø c=c+a:POKE n,a
33Ø n=n+1:GOTO 28Ø
34Ø IF PEEK(&ACØ1)=&C9 THEN 28Ø
35Ø RESTORE 22Ø:GOTO 28Ø
36Ø PRINT"1 - Spiderzoid"
37Ø PRINT"2 - Scorpozoid"
38Ø PRINT"3 - Trooperzoid"
39Ø PRINT"4 - Tank"
4ØØ PRINT"5 - Great Gorgon"
41Ø PRINT"6 - Mighty Zoidzilla"
42Ø INPUT"Choose zoid (1-6)";n
43Ø n=n-1:POKE &BEØ1,n
44Ø LOAD"":CALL &3A6A
45Ø LOAD"!",&2Ø4Ø:CALL &BE1D
```



POKE METHODS ON TAPE

Here's how to input most *Cheat Mode* tape pokes – the instructions for each poke tell you which of the two to use. 664 and 6128 owners: first type |tape.

METHOD 1

Rewind the game tape to the beginning, type in the poke listing and then type RUN and press the Enter key. (Don't use the key marked CTRL or Control, or the poke won't work.) Press the Play key on the cassette deck, then any key on the main keyboard - spacebar does nicely. The tape should now play through as normal.

METHOD 2

Skip the first bit of the game program. To do this, rewind the game tape to the beginning; type in the listing; now type CAT and press Enter. Start the tape by pressing Play and then any key. Soon you'll see the message: 'Found something Block 1'. It doesn't matter what the something is, and it varies from game to game. If the *Cheat Mode* instructions just tell you to skip the first block, stop the tape here.

If the instructions tell you to skip things, stop the tape when the "Found" message comes up for the last thing you're trying to skip.

Once you've stopped the tape, press Escape, type RUN and press Enter. Now press Play on the tapedeck and any key on the keyboard to start the tape.

Vixen

The whip-wielding heroine of Martech's scrolling whip-em-up is given infinite lives courtesy of – you guessed it, **Phil Howard. (Method 1)**

```
1 ' Vixen - tape
2 ' by Phil Howard
3 ' Amstrad Action Sept 88
1Ø DATA ØØ,2a,Øf,bc,22,1d
2Ø DATA bd,21,Øe,bc,36,c3
3Ø DATA 23,36,15,23,36,be
4Ø DATA c3,12,32,3e,ØØ,cd
5Ø DATA 1c,bd,3a,ØØ,be,3c
6Ø DATA 32,ØØ,be,fe,Ø2,cØ
7Ø DATA 21,2b,be,22,55,34
8Ø DATA c9,dd,21,5b,aa,11
9Ø DATA ØØ,Ø1,cd,ea,a9,21
1ØØ DATA 3e,be,22,2Ø,ab,c3
11Ø DATA 85,aa,3e,a7,32,14
12Ø DATA 35,c3,bØ,33
13Ø MEMORY &3ØØØ:y=Ø
14Ø FOR x=&BEØØ TO &BE45
15Ø READ a$:a=VAL("&"+a$)
16Ø POKE x,a:y=y+a:NEXT
17Ø IF y<>&1A1E THEN 2ØØ
18Ø LOAD""
19Ø CALL &BEØØ
2ØØ PRINT"Data error"
```



GO-Loaders – Part 3

Phil Howard has some pokes for the infamous *Go-Loaders*. If you already have the Lock-key program (from *AA*33 and 34) you don't need to type in the following program: if you haven't then type in the LOCK program and save it to tape or disk using `SAVE"LOCK"`.

Next type in the poke that you want (e.g. BEDLAM) and save that to tape or disk using `SAVE "BEDLAM",A`.

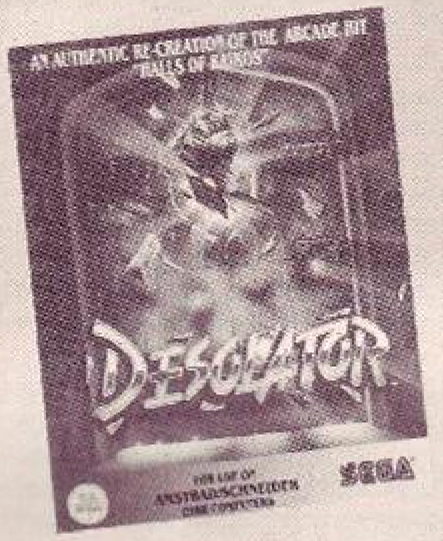
Reset your computer and do the following:

```
LOAD"LOCK"
MERGE"BEDLAM"
RUN
```

Place the game cassette in the tape deck and press play. The poke takes about 3.5 minutes to run.

```
1Ø '**** LOCK ****
2Ø '
3Ø Y=Ø:RESTORE 1ØØ
4Ø FOR  x=&42ØØ TO &4386
5Ø READ a$:a=VAL("&"+a$)
6Ø y=y+a:POKE x,a:NEXT
7Ø IF y=37465 THEN 59Ø
8Ø PRINT"ERROR IN LOCK":END
9Ø '
1ØØ DATA FE,ØØ,2Ø,Ø3,C3,3B,43,FE
11Ø DATA Ø1,2Ø,Ø7,DD,36,ØF,F6,ØE
12Ø DATA 1Ø,C9,FE,Ø2,2Ø,Ø7,DD,36
13Ø DATA ØC,F9,ØE,ØD,C9,FE,Ø3,2Ø
14Ø DATA ØF,DD,36,1E,E9,DD,7E,ØC
15Ø DATA D6,1Ø,DD,77,ØC,ØE,1F,C9
16Ø DATA FE,Ø4,2Ø,Ø7,DD,36,11,F6
17Ø DATA ØE,12,C9,FE,Ø5,2Ø,Ø7,DD
18Ø DATA 36,1Ø,F6,ØE,11,C9,FE,Ø6
19Ø DATA 2Ø,Ø7,DD,36,ØD,F8,ØE,ØE
2ØØ DATA C9,FE,Ø7,2Ø,Ø7,DD,36,1B
21Ø DATA EE,ØE,1C,C9,FE,Ø8,2Ø,Ø7
22Ø DATA DD,36,ØE,F7,ØE,ØF,C9,FE
23Ø DATA Ø9,2Ø,Ø7,DD,36,23,CØ,ØE
24Ø DATA 24,C9,FE,ØA,2Ø,13,DD,E5
25Ø DATA E1,11,Ø6,ØØ,19,7C,D6,1Ø
26Ø DATA DD,75,15,DD,77,16,ØE,17
27Ø DATA C9,FE,ØB,2Ø,13,DD,E5,E1
28Ø DATA 11,Ø6,ØØ,19,7C,D6,1Ø,DD
29Ø DATA 75,14,DD,77,15,ØE,16,C9
3ØØ DATA FE,ØC,2Ø,13,DD,E5,E1,11
31Ø DATA Ø7,ØØ,19,7C,D6,1Ø,DD,75
32Ø DATA 1Ø,DD,77,11,ØE,12,C9,FE
33Ø DATA ØD,2Ø,ØF,DD,7E,Ø3,D6,1Ø
34Ø DATA DD,77,Ø3,DD,36,1A,E9,ØE
35Ø DATA 1B,C9,DD,36,1D,2Ø,DD,36
36Ø DATA 1E,EB,ØE,1F,C9,F3,21,39
37Ø DATA 7D,11,39,5D,ØØ,Ø1,ØØ,ØD
38Ø DATA ED,BØ,21,36,6D,11,37,6D
39Ø DATA Ø1,ØØ,1Ø,36,ØØ,ED,BØ,36
4ØØ DATA C3,23,36,34,23,36,43,21
41Ø DATA D5,42,11,39,6D,Ø1,ØD,ØØ
42Ø DATA ED,BØ,21,4Ø,6D,36,EB,21
43Ø DATA 5Ø,7D,11,5Ø,6D,Ø1,15,ØØ
44Ø DATA ED,BØ,21,FF,4Ø,DD,21,58
45Ø DATA 7D,23,E5,7E,CD,ØØ,42,DD
46Ø DATA E5,E1,5D,7C,D6,1Ø,57,Ø6
47Ø DATA ØØ,DD,Ø9,ED,BØ,ED,73,ØØ
48Ø DATA 4Ø,C3,39,6D,ED,7B,ØØ,4Ø
49Ø DATA E1,18,DE,E1,ED,4B,Ø2,4Ø
5ØØ DATA D9,C3,89,BE,22,D7,42,7C
51Ø DATA D6,1Ø,67,22,FB,42,22,32
52Ø DATA 43,E5,7C,D6,1Ø,67,22,DA
53Ø DATA 42,E1,2B,2B,2B,22,E3,42
54Ø DATA 23,22,E6,42,11,Ø9,ØØ,19
55Ø DATA 22,Ø3,43,11,1Ø,ØØ,19,22
56Ø DATA ØB,43,11,ØØ,1Ø,19,22,Ø8
57Ø DATA 43,11,Ø8,ØØ,19,22,17,43
58Ø DATA F3,D9,ED,43,Ø2,4Ø,C9
59Ø '
6ØØ '**** KEY ****
61Ø '
62Ø y=Ø:x=&41ØØ:RESTORE 74Ø
63Ø WHILE a$<>"ØØ"
64Ø READ a$:y=y+VAL("&"+a$)
65Ø POKE x,VAL("&"+LEFT$(a$,1))
66Ø POKE x+1,VAL("&"+RIGHT$(a$,1))
67Ø x=x+2:WEND
68Ø '
69Ø '---------------------------
```





Desolator

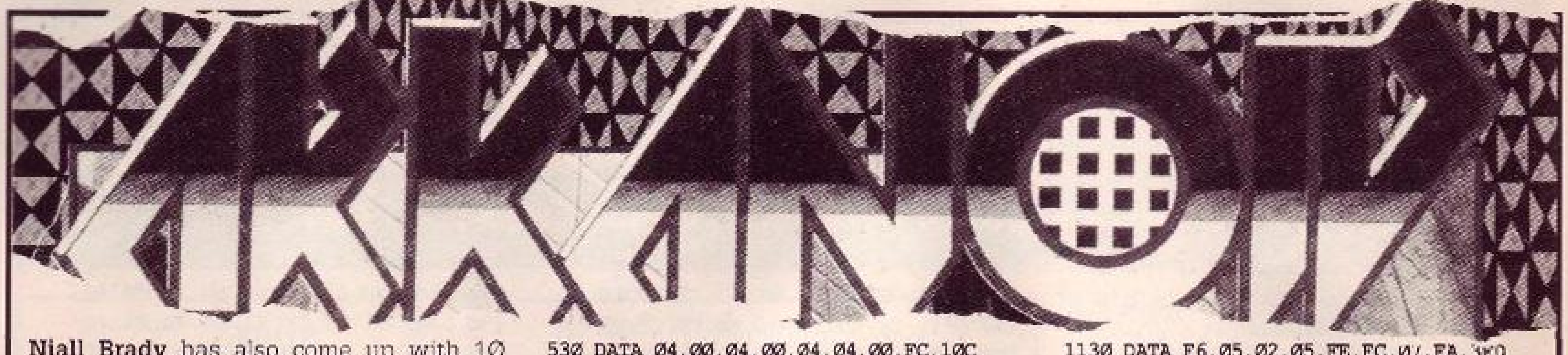
Phil Howard again, this time with infinite lives for the game of child freeing.
(Method 1)

```
1 ' Desolator - tape
2 ' by Phil Howard
3 ' Amstrad Action Sept 88
71Ø IF y=5ØØ3 THEN 81Ø
72Ø PRINT"Error in key":END
73Ø '
74Ø DATA 14,92,1b,51,b7,b1,a5,8c
75Ø DATA 41,46,51,a5,73,61,12,a9
76Ø DATA 49,12,b1,be,5e,da,42,cb
77Ø DATA c5,18,54,61,42,da,42,cb
78Ø DATA 25,44,15,5a,51,b8,63,71
79Ø DATA 4a,34,be,6d,14,41,65,11
8ØØ DATA 4Ø,ØØ
81Ø '
82Ø '**** CHEAT ****
83Ø '
84Ø y=Ø:RESTORE 91Ø
85Ø FOR x=&BE8Ø TO &BE9A
86Ø READ a$:a=VAL("&"+a$)
87Ø POKE x,a:y=y+a:NEXT
88Ø IF y<>3462 THEN 96Ø
89Ø PRINT"Error in cheat":END
9ØØ '
91Ø DATA 21,ab,94,cd,44,43,c3,d5
92Ø DATA 42,21,92,be,22,5b,9e,c3
93Ø DATA d4,9c,cd,Ø3,b9,3e,a7,32
94Ø DATA ca,Ø6,c9
95Ø '
96Ø MEMORY &1FFF
97Ø LOAD"DESOLATOR"
98Ø PRINT"Don't Panic.. This takes
forever"
99Ø CALL &BE8Ø
```

Bedlam

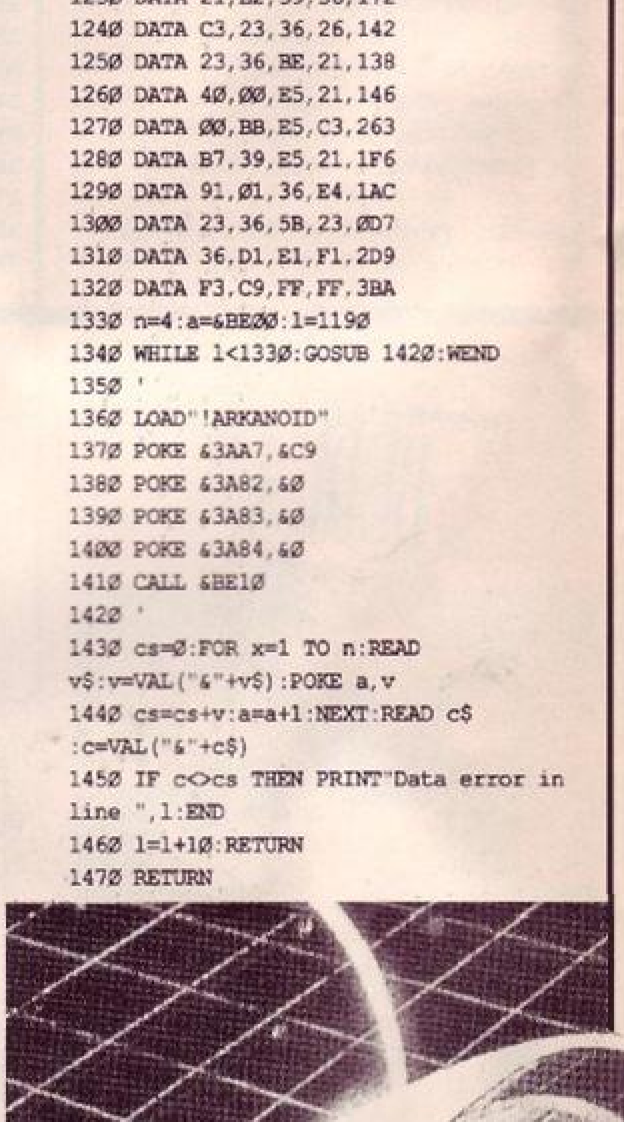
Phil's also hacked into the shoot-em-up to give you infinite lives.
(Method 1)

```
1 ' Bedlam - tape
2 ' by Phil Howard
3 ' Amstrad Action Sept 88
71Ø IF y=4454 THEN 81Ø
72Ø PRINT"Error in key":END
73Ø '
74Ø DATA 15,11,51,43,4d,b2,64,34
75Ø DATA 74,ad,45,ab,a6,14,25,da
76Ø DATA 11,15,e1,14,95,c6,73,64
77Ø DATA 51,29,4a,14,45,15,2c,8a
78Ø DATA b8,e4,18,19,42,71,1a,61
79Ø DATA 21,56,4b,16,56,1b,17,bc
8ØØ DATA 1a,e5,ØØ
81Ø '
82Ø '**** CHEAT ****
83Ø '
84Ø y=Ø:RESTORE 91Ø
85Ø FOR x=&BE8Ø TO &BE9A
86Ø READ a$:a=VAL("&"+a$)
87Ø POKE x,a:y=y+a:NEXT
88Ø IF y<>3556 THEN 96Ø
89Ø PRINT"Error in cheat":END
9ØØ '
91Ø DATA 21,93,94,cd,44,43,c3,d5
92Ø DATA 42,21,92,be,22,87,9e,c3
93Ø DATA cc,9c,cd,b8,9e,3e,a7,32
94Ø DATA 6d,1b,c9
95Ø '
96Ø MEMORY &1FFF
97Ø LOAD"BEDLAM"
98Ø PRINT"Don't Panic.. This takes
forever"
```



Niall Brady has also come up with 10 new screens for Imagine's breakout clone. After you complete the ten screens the final one is loaded. **(Method 1)**

```
1 ' Arkanoid - tape
2 ' By Niall Brady
3 ' Amstrad Action Sept 88
1Ø DATA 21,3A,CØ,11,7F,35,Ø1,5Ø,231
2Ø DATA Ø3,ED,BØ,21,26,CØ,11,5D,315
3Ø DATA 3F,Ø1,14,ØØ,ED,BØ,3E,ØA,239
4Ø DATA 32,B7,Ø2,ØØ,ØØ,ØØ,ØØ,ØØ,ØEB
5Ø DATA ØØ,ØØ,ØØ,C3,E5,45,B4,36,2D7
6Ø DATA 7F,35,E2,35,4D,36,7C,37,3Ø1
7Ø DATA 29,37,9D,38,66,38,F2,37,2FC
8Ø DATA DA,37,F3,Ø8,FC,ØC,FA,FB,5Ø9
9Ø DATA ØB,Ø3,F1,F3,F8,Ø3,Ø8,FC,3F1
1ØØ DATA ØB,FA,Ø3,FB,Ø9,Ø2,F1,F3,3F2
11Ø DATA F8,F8,Ø3,Ø2,Ø8,FC,ØA,FA,3FD
12Ø DATA Ø3,Ø2,FB,Ø7,Ø4,F1,F3,F8,3E7
13Ø DATA F8,F8,Ø3,Ø2,Ø4,Ø8,FC,Ø9,3Ø6
14Ø DATA FA,Ø3,Ø2,Ø4,FB,Ø5,ØØ,F1,2F4
15Ø DATA F3,F8,F8,F8,F8,Ø3,Ø2,Ø4,4DC
16Ø DATA ØØ,Ø8,FC,Ø8,FA,Ø3,Ø2,Ø4,2ØF
17Ø DATA ØØ,FB,Ø3,Ø7,F1,F3,F8,F8,4D9
18Ø DATA F8,F8,F8,Ø3,Ø2,Ø4,ØØ,Ø7,2F8
19Ø DATA Ø8,FC,Ø7,Ø8,Ø3,Ø2,Ø4,ØØ,11C
2ØØ DATA Ø7,FC,Ø8,Ø7,FF,FC,Ø4,FA,4ØB
21Ø DATA Ø8,Ø8,FA,FA,Ø8,Ø8,FC,Ø6,316
22Ø DATA FA,Ø8,Ø4,Ø4,Ø4,Ø8,Ø4,Ø4,11E
23Ø DATA Ø4,FC,Ø4,FA,Ø8,FC,Ø9,Ø4,3ØF
24Ø DATA FA,FA,Ø6,FC,ØA,Ø4,Ø4,FA,4Ø2
25Ø DATA Ø4,Ø6,FC,ØA,Ø4,FA,Ø4,Ø4,216
26Ø DATA Ø6,FC,Ø9,Ø4,FA,FA,Ø4,Ø4,3ØB
27Ø DATA Ø6,FC,Ø7,Ø4,FA,FC,Ø5,Ø8,31Ø
28Ø DATA Ø6,FC,Ø5,Ø4,Ø8,Ø8,FC,Ø6,21D
29Ø DATA Ø7,Ø6,FC,Ø4,Ø4,Ø7,Ø7,FA,219
3ØØ DATA FA,FA,Ø4,Ø4,Ø6,Ø6,FC,Ø4,3Ø8
31Ø DATA Ø4,FC,Ø6,FA,Ø6,FC,Ø5,Ø4,3ØB
32Ø DATA FC,Ø8,FA,FC,Ø4,Ø4,FC,ØA,4Ø8
33Ø DATA FA,Ø4,Ø4,FC,ØC,FA,Ø4,FF,4Ø7
34Ø DATA FC,Ø4,FA,Ø4,FC,Ø3,FA,Ø6,3FD
35Ø DATA F3,Ø4,FC,Ø5,FA,Ø4,FA,FA,4EA
36Ø DATA Ø8,FC,Ø5,FA,Ø4,FC,Ø6,FA,4Ø3
37Ø DATA ØØ,ØØ,FC,Ø6,FA,Ø6,FA,Ø4,3ØØ
38Ø DATA FA,FA,ØØ,ØØ,ØØ,FA,FA,Ø6,3EE
39Ø DATA FC,Ø7,FA,FC,Ø4,ØØ,FC,Ø9,4Ø2
4ØØ DATA FA,FC,Ø4,ØØ,FC,Ø9,Ø8,FC,4Ø3
41Ø DATA Ø4,ØØ,FC,ØB,Ø7,ØØ,ØØ,FC,2ØE
42Ø DATA Ø9,FA,FC,Ø3,ØØ,FC,Ø4,FA,3FC
43Ø DATA Ø4,FA,Ø6,FA,FA,FA,ØØ,ØØ,3F2
44Ø DATA FC,Ø3,FA,Ø6,FC,Ø5,FA,Ø4,3FE
45Ø DATA FA,ØØ,FC,Ø7,FA,Ø4,FC,Ø4,3FB
46Ø DATA FA,Ø8,FC,12,FA,Ø4,FF,FC,5Ø9
47Ø DATA Ø4,FA,FC,Ø5,Ø4,FC,Ø6,FA,3FF
48Ø DATA FC,Ø9,Ø4,FA,FA,Ø4,FC,Ø4,4Ø1
49Ø DATA Ø4,ØØ,FC,Ø4,Ø4,ØØ,FC,Ø6,2ØA
5ØØ DATA Ø4,ØØ,ØØ,Ø4,Ø4,Ø4,ØØ,ØØ,Ø1Ø
51Ø DATA FC,Ø5,Ø4,ØØ,Ø4,ØØ,Ø4,Ø4,111
52Ø DATA ØØ,Ø4,ØØ,FC,Ø4,Ø4,ØØ,Ø4,1ØC
53Ø DATA Ø4,ØØ,Ø4,ØØ,Ø4,Ø4,ØØ,FC,1ØC
54Ø DATA Ø4,Ø4,ØØ,Ø4,ØØ,ØØ,Ø4,ØØ,Ø1Ø
55Ø DATA Ø4,ØØ,ØØ,FC,Ø4,Ø4,ØØ,ØØ,1Ø8
56Ø DATA Ø4,ØØ,Ø4,ØØ,ØØ,Ø4,ØØ,FC,1Ø8
57Ø DATA Ø4,Ø4,ØØ,Ø4,Ø4,ØØ,Ø4,ØØ,Ø14
58Ø DATA Ø4,Ø4,ØØ,FC,Ø4,Ø4,ØØ,FC,2Ø8
59Ø DATA Ø4,Ø4,ØØ,FC,Ø7,Ø4,ØØ,FC,2ØB
6ØØ DATA Ø4,Ø4,ØØ,FC,1F,Ø4,FA,FA,31B
61Ø DATA FC,Ø9,Ø4,FF,FC,ØD,Ø8,FA,413
62Ø DATA FA,FA,FA,FA,FA,FA,FA,FA,7DØ
63Ø DATA FA,FA,FA,FA,FA,FA,FA,FA,7DØ
64Ø DATA FA,FA,FA,F1,F9,F8,FB,Ø5,6DØ
65Ø DATA Ø7,Ø9,Ø9,Ø9,Ø9,Ø9,Ø9,Ø9,Ø46
66Ø DATA Ø9,Ø9,F1,F9,FB,Ø7,FA,FB,4F3
67Ø DATA Ø5,Ø7,F2,F8,FB,Ø5,Ø5,F8,3F3
68Ø DATA FB,Ø5,Ø5,F2,F8,FB,Ø5,Ø9,3F8
69Ø DATA F8,FB,Ø5,Ø9,F2,F8,FB,Ø5,4EB
7ØØ DATA Ø5,F8,FB,Ø5,Ø5,F2,F8,FB,4E7
71Ø DATA Ø5,Ø7,F8,FB,Ø5,Ø7,FF,FC,4Ø6
72Ø DATA ØD,Ø4,FC,ØD,Ø5,FA,F9,87,399
73Ø DATA Ø6,FE,F6,FA,87,86,Ø5,FE,5Ø4
74Ø DATA F6,87,86,85,Ø4,FE,F6,Ø7,487
75Ø DATA 86,85,84,FE,F9,Ø7,86,85,498
76Ø DATA 84,83,FE,F9,86,85,84,83,51Ø
77Ø DATA Ø2,FE,F9,Ø6,85,84,83,82,4ØD
78Ø DATA FE,F9,85,84,83,82,Ø1,FE,5Ø4
79Ø DATA F9,Ø5,84,83,82,81,FE,F9,4FF
8ØØ DATA 84,83,82,81,ØØ,FE,F6,83,481
81Ø DATA 82,81,ØØ,FE,F6,Ø3,82,81,3FD
82Ø DATA 8Ø,FE,F6,FA,Ø2,81,8Ø,FE,56F
83Ø DATA F6,F9,Ø1,8Ø,FF,FC,1A,Ø8,48D
84Ø DATA FC,1A,14,FC,1A,ØØ,FC,1A,356
85Ø DATA 14,FC,Ø6,Ø8,FA,FC,ØC,Ø8,328
86Ø DATA FA,FC,Ø6,Ø8,FF,FB,ØD,Ø6,411
87Ø DATA F1,Ø6,FB,ØC,Ø6,F1,Ø6,Ø6,3Ø1
88Ø DATA FB,ØB,Ø6,F1,Ø6,Ø6,Ø6,FB,3ØA
89Ø DATA ØA,Ø6,F1,FC,Ø4,Ø6,FB,Ø9,3ØB
9ØØ DATA Ø6,F1,FC,Ø5,Ø6,FB,Ø8,Ø4,3Ø5
91Ø DATA F1,FC,Ø5,Ø6,Ø4,FB,Ø7,Ø4,3Ø2
92Ø DATA F1,FC,Ø5,Ø6,Ø4,Ø4,FB,Ø6,3Ø1
93Ø DATA Ø4,F1,FC,Ø5,Ø6,Ø4,Ø4,Ø4,2Ø8
94Ø DATA FB,Ø5,Ø4,F1,FC,Ø5,Ø6,FC,3F8
95Ø DATA Ø4,Ø4,FB,Ø4,Ø8,F1,FC,Ø5,3Ø1
96Ø DATA Ø6,FC,Ø4,Ø4,Ø8,FB,Ø3,Ø8,218
97Ø DATA F1,FC,Ø5,Ø6,FC,Ø4,Ø4,Ø8,3Ø4
98Ø DATA Ø8,FB,Ø2,Ø8,F1,FC,Ø5,Ø6,3Ø5
99Ø DATA FC,Ø4,Ø4,FC,Ø4,Ø8,FB,ØC,313
1ØØØ DATA FA,Ø8,Ø8,FC,Ø9,Ø9,Ø8,Ø8,228
1Ø1Ø DATA FF,FC,41,Ø7,FB,Ø4,Ø4,F1,437
1Ø2Ø DATA FC,Ø6,Ø7,FB,Ø6,Ø7,FB,Ø4,31Ø
1Ø3Ø DATA Ø4,F1,FC,ØC,Ø7,FB,Ø7,Ø7,3ØD
1Ø4Ø DATA FB,Ø4,Ø4,F1,FB,Ø5,Ø7,FB,3F6
1Ø5Ø DATA Ø5,Ø4,F1,Ø7,FB,Ø5,Ø7,FB,3Ø3
1Ø6Ø DATA Ø4,FA,FC,Ø5,Ø9,Ø4,FC,Ø5,3ØD
1Ø7Ø DATA Ø9,FC,1B,Ø4,FC,ØD,Ø8,FF,334
1Ø8Ø DATA F6,FA,Ø5,Ø2,ØØ,Ø2,ØØ,Ø2,1FB
1Ø9Ø DATA Ø5,FE,F6,Ø5,Ø2,ØØ,Ø2,Ø8,2ØA
11ØØ DATA Ø2,ØØ,Ø2,Ø5,FE,F6,FA,Ø5,2FC
111Ø DATA Ø2,ØØ,Ø2,ØØ,Ø2,Ø5,FE,F6,1FF
112Ø DATA F9,Ø5,Ø2,ØØ,Ø2,Ø5,FE,F6,2FB
113Ø DATA F6,Ø5,Ø2,Ø5,FE,FC,Ø7,FA,3FD
114Ø DATA Ø5,FF,ØØ,ØØ,ØØ,ØØ,ØØ,ØØ,1Ø4
115Ø OPENOUT "NCB":MEMORY &2ØØØ:CLOSE-
OUT:MODE Ø
116Ø n=8:a=&CØØØ:l=1Ø
117Ø WHILE l<115Ø:GOSUB 142Ø:WEND
118Ø ' LOADER
119Ø DATA 3E,4Ø,32,Ø3,ØB3
12ØØ DATA BF,21,4D,BF,1EC
121Ø DATA 36,ØØ,23,36,Ø8F
122Ø DATA CØ,C3,ØØ,BF,242
123Ø DATA 21,E2,39,36,172
124Ø DATA C3,23,36,26,142
125Ø DATA 23,36,BE,21,138
126Ø DATA 4Ø,ØØ,E5,21,146
127Ø DATA ØØ,BB,E5,C3,263
128Ø DATA B7,39,E5,21,1F6
129Ø DATA 91,Ø1,36,E4,1AC
13ØØ DATA 23,36,5B,23,ØD7
131Ø DATA 36,D1,E1,F1,2D9
132Ø DATA F3,C9,FF,FF,3BA
133Ø n=4:a=&BEØØ:l=119Ø
134Ø WHILE l<133Ø:GOSUB 142Ø:WEND
135Ø '
136Ø LOAD"!ARKANOID"
137Ø POKE &3AA7,&C9
138Ø POKE &3A82,&Ø
139Ø POKE &3A83,&Ø
14ØØ POKE &3A84,&Ø
141Ø CALL &BE1Ø
142Ø '
143Ø cs=Ø:FOR x=1 TO n:READ
v$:v=VAL("&"+v$):POKE a,v
144Ø cs=cs+v:a=a+1:NEXT:READ c$
:c=VAL("&"+c$)
145Ø IF c<>cs THEN PRINT"Data error in
line ",l:END
146Ø l=l+1Ø:RETURN
147Ø RETURN
```



Ranarama

Niall Brady of Sligo makes Hewson's game of monster bashing much easier by giving you infinite health; and in the ritual combat you only have two letters to swap rather than eight. Just type in the poke and run it with the *Ranarama* disk in the drive.



```
1 ' Ranarama - disk
2 ' By Niall Brady
3 ' Amstrad Action Sept 88
1Ø DATA Ø1,1D,Ø1,21,Ø4Ø
2Ø DATA ØF,5Ø,11,ØØ,Ø7Ø
3Ø DATA 5Ø,Ø6,FF,1A,16F
4Ø DATA AE,77,23,13,15B
5Ø DATA 1Ø,F9,3A,Ø7,14A
6Ø DATA 4Ø,3D,32,Ø7,ØB6
7Ø DATA 4Ø,32,Ø7,5Ø,ØC9
8Ø DATA Ø6,5Ø,ED,43,186
9Ø DATA Ø1,4Ø,Ø6,ØØ,Ø47
1ØØ DATA ED,43,Ø1,5Ø,181
11Ø DATA A7,2Ø,D8,3E,1DD
12Ø DATA BF,21,2C,5Ø,15C
13Ø DATA 77,2B,AF,77,1C8
14Ø DATA 21,1F,5Ø,11,ØA1
15Ø DATA 5E,4Ø,Ø1,ØØ,Ø9F
16Ø DATA Ø2,ED,BØ,3E,1DD
17Ø DATA Ø1,Ø1,7E,FA,17A
18Ø DATA ED,79,3E,Ø1,1A5
19Ø DATA CD,ØE,BC,Ø6,19D
2ØØ DATA FF,76,1Ø,FD,282
21Ø DATA F3,21,5C,4Ø,1BØ
22Ø DATA 11,1D,ØØ,Ø1,Ø2F
23Ø DATA ØØ,Ø1,ED,BØ,19E
24Ø DATA C3,1D,ØØ,3E,11E
25Ø DATA 79,2Ø,4E,42,129
26Ø DATA 2Ø,28,43,29,ØB4
27Ø MEMORY &2ØØØ
28Ø a=&3FFD:1=1Ø
29Ø WHILE 1<27Ø:
    GOSUB 55Ø:WEND
3ØØ LOAD"DISC",&4FB8
31Ø a=&BFØØ:1=33Ø
32Ø WHILE 1<37Ø:
    GOSUB 55Ø:WEND
33Ø DATA 21,52,99,3E,14A
34Ø DATA CØ,77,3E,63,1D8
35Ø DATA 23,77,C3,ØØ,15D
36Ø DATA 99,ØØ,ØØ,ØØ,Ø99
37Ø a=&BE8Ø:1=39Ø
38Ø WHILE 1<54Ø:
    GOSUB 55Ø:WEND
39Ø DATA 21,8E,BE,11,17E
4ØØ DATA ØØ,BF,Ø1,4Ø,1ØØ
41Ø DATA ØØ,ED,BØ,C3,26Ø
42Ø DATA ØØ,BF,Ø1,7E,13E
43Ø DATA FA,AF,ED,79,3ØF
44Ø DATA Ø1,89,7F,ED,1F6
45Ø DATA 49,21,ØØ,ØØ,Ø6A
46Ø DATA 11,ØØ,ØØ,Ø1,Ø12
47Ø DATA ØØ,Ø2,ED,BØ,19F
48Ø DATA Ø1,8D,7F,ED,1FA
49Ø DATA 49,21,91,79,174
5ØØ DATA AF,77,23,77,1CØ
51Ø DATA 23,77,21,65,12Ø
52Ø DATA 65,77,C3,B5,254
53Ø DATA 5A,ØØ,ØØ,ØØ,Ø5A
54Ø CALL &3FFD
55Ø cs=Ø:FOR x=1 TO 4
56Ø READ v$
57Ø v=VAL("&"+v$):POKE a,v
58Ø cs=cs+v:a=a+1:NEXT
59Ø READ c$:c=VAL("&"+c$)
6ØØ IF c<>cs THEN PRINT"Data
    error in line ",1:END
62Ø 1=1+1Ø:RETURN
```

RASTERSCAN

Julian Page of Shrewsbury has sent in this poke for a variety of things in Mastertronic's *Rave* game. (**Method 1**)

```
1 'Rasterscan - Tape
2 'By Julian Page
3 'Amstrad Action Sept
1988
9 'Don't remove!
10 DATA 21,00,40,3E
20 DATA 16,E5,E5,F5
30 DATA CD,A1,BC,F1
40 DATA D1,E1,E5,CD
50 DATA A1,BC,21,25
60 DATA BF,22,24,40
70 DATA C9,42,52,41
80 DATA 58,58,5B,48
90 DATA 41,43,4B,45
100 DATA 52,21,19,BF
110 DATA 11,F7,0B,01
120 DATA 0C,00,ED,B0
130 DATA ED,62,AF
139 'Infinite power
140 DATA 32,DF,48
149 'Locks auto-open
150 DATA 22,D5,3E
159 'No nasty music
160 DATA 32,FD,14
170 DATA 22,FE,14
179 'No music bug
180 DATA 22,07,15
190 DATA 32,09,15
199 'Invulnerability
200 DATA 21,62,15
210 DATA 22,F6,0C
219 'Don't remove!
220 DATA C3,FD,03,JPS
230 X=&BF00:MODE 1
240 READ A$
250 IF A$="JPS" THEN 280
260 POKE X,VAL("&"+A$)
270 X=X+1:GOTO 240
280 FOR X=&BF00 TO &BF32
290 C=C+PEEK(X):NEXT X
300 IF C<>&16E6 THEN 320
310 CALL &BF00
320 PRINT"DATA ERROR"
```

Shanghai Karate

Mike Wong has also sent in a poke for the martial arts game. It allows you to choose the number of lives for player 1 and 2. In the single player game the computer is player 2 so you can progress more easily. (**Method 1**)

```
1 ' Shanghai Karate - tape
2 ' by Mike Wong
3 ' Amstrad Action Sept 88
1Ø MEMORY &1FFF
2Ø PRINT"How many lives for:"
3Ø INPUT" player 1";x
4Ø INPUT" player 2";y
5Ø LOAD""
6Ø CALL &75ØØ
7Ø CALL &77EØ
8Ø LOAD"!"
9Ø LOAD"!"
1ØØ POKE &417F,&8F
11Ø POKE &41CC,&B3
12Ø POKE &422C,&F9
13Ø FOR n=&BEØØ TO &BE23
14Ø READ a$:a=VAL("&"+a$)
15Ø POKE n,a:c=c+a:NEXT
16Ø IF c<>2676 THEN 29Ø
17Ø POKE &BEØF,x
18Ø POKE &BE14,y
19Ø CALL &4ØØ5
2ØØ DATA 3e,c3,21,Øe
21Ø DATA be,32,7e,ae
22Ø DATA 22,7f,ae,c3
23Ø DATA ØØ,ac,3e,ØØ
24Ø DATA 32,fd,Ø6,3e
25Ø DATA ØØ,32,a6,Ø7
26Ø DATA 21,Ø1,Ø7,36
27Ø DATA ØØ,23,36,ØØ
28Ø DATA 23,36,ØØ,c9
29Ø PRINT"Error"
```

Win an ENTIRE ISSUE'S RAVES!

To win an entire issue's *Rave* software – and that includes the *Mastergame* – all you have to do is produce an excellent map, poke or set of playing tips.

The best solution each month wins a copy of every *Rave* and the *Mastergame* of that issue. The number of games varies of course, but in a good issue it can be half a dozen. We also give runner-up prizes every month of a *Rave* or the *Mastergame*.

This month's winner of the *Raves* and the *Mastergame* is Niall Brady for his *Arkanoid* and *Ranarama* pokes. The runners up who receive either a *Rave* or the *Mastergame* are Phil Howard and Mike Wong. Really Phil, you ought to move over and give someone else a chance (mind you, it's all good stuff!).

AA Buyers Guide
Printers

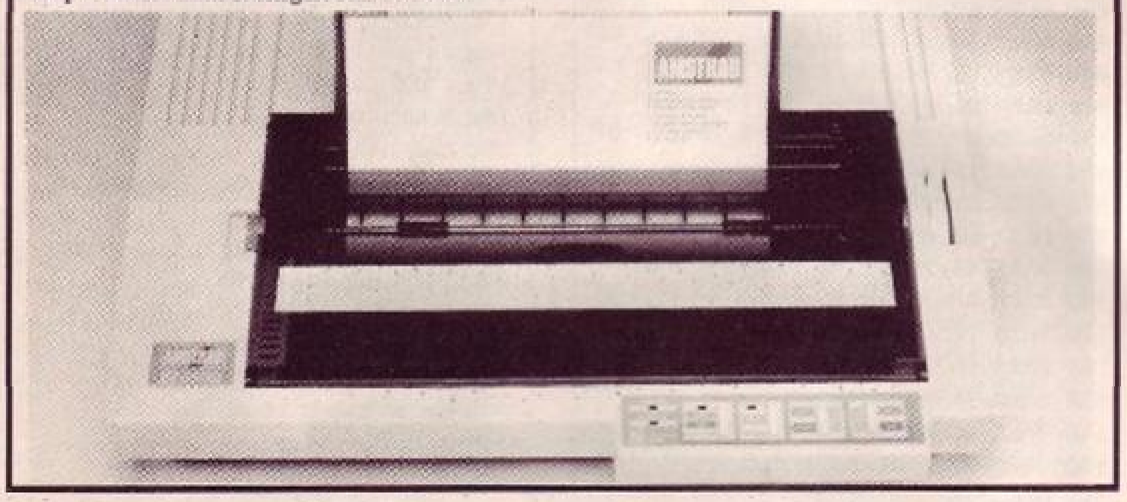
Amstrad LQ3500
Amstrad ■ £401.35 rrp ■ *AA*31

Yes, the cheapest 24-pin printer available is an Amstrad! Well, it's badged as such. The truth is, though, it looks much more conventional than their other printers: possibly to woo the business community. The paper is loaded from the rear in the LQ500, making loading more time consuming.

At this price you might expect a stunning performance – and indeed it's really not bad at all. It can manage about 30 cps in letter quality mode, and 62 cps in draft. Hardly world shaking, but the quality is a cut above printers below its price range.

Recently there was a nasty scene caused by Epson, saying that Amstrad couldn't use the letters LQ in a printer name. Amstrad shrugged it off in the end, but the name looked shaky for a while.

In the final analysis, this doesn't look particularly attractive. Print quality is excellent, and plenty of different type-styles are built into the printer. But the speed is nothing to write home about. Also, it looks a little tacky, and you're left with the impression that it might fall to bits.



Star LC10
Star Micronics ■ £263.35/£297.85 rrp ■ *AA*32

Two prices have been indicated because two models of this 9 pin printer are available. The first is for the standard dot matrix printer, which is a good, no nonsense machine. Fonts can be selected by button push, rather than typing in a fiddly control code.

One slightly unusual feature is that the centronics port is on the side, taking up more space, rather than the back of the machine.

Also common to both models is a plastic paper feeder. Now personally I found it a bit of a bind, because it increases the height of the printer. Try putting the printer on the floor.

The second price is for the colour model. It may seem expensive, but believe it or not that is relatively inexpensive for a colour printer. It uses a multi-colour ribbon to produce the different colours and mixes.

Unfortunately there isn't any software yet to take advantage of the colours. But it seems that a colour screen dump routine is bound to appear sooner or later.

Epson EX800
Epson ■ £458.85 ■ AA29

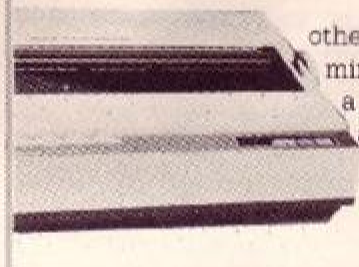
This is one of Epson's mid-priced printers. As usual, it can be upgraded in a hundred and one ways, like cut sheet feeds, serial ports and longer life ribbons. It's also fairly quiet and can maintain a respectable printing speed. Sans Serif/Roman NLQ fonts are incorparated.

It has the benefit of having a control panel to select fonts with. However these fonts suffer from being the same with just different spacing to differentiate between them. As with every Epson you are paying for the name, rather than the printer.

Panasonic KXP3131U
Panasonic ■ £335.25 (discontinued) ■ *AA*29

Rather than yawning over the dot matrix printers talked about elsewhere, you could gasp at the typewriter quality of this marvellous scribe. It uses the daisy-wheel system to give its ultimate quality results.

The side effect of this happy situation are that it can't print bit graphics (no trendy screen dumps), and it doesn't have many fonts. If you want different fonts, just plug in a different Diablo-compatible one and off you go.



Just one other thing – bear in mind that it is not a quiet machine, and a noise suppression box is a *good idea*.

Amstrad DMP/2160
Amstrad ■ £159.95 ■ *AA*6

What's with this Amstrad policy of introducing a '160' version of a printer? What happens is that Amstrad first of all produce a printer with the normal '000' classification – in this case the DMP/2000. Then they improve the performance (generally they quote a slightly higher draft speed) and produce a better printer at the same price so that they can gradually phase out the old machine.

One of the good points of the 2160 is that you load the paper through the front. This means two things: first the printer needs to be raised above the paper, and second that loading continuous stationery is a sight easier than on other printers.

On the minus side is the poor NLQ mode. At around £5 or so the ribbons are a touch expensive too. All in all the DMP2160 is the lowest priced printer,

The EEC strikes back

Recently the EEC announced a new levy on printers that come from Japan. That's one of the reasons why the Epsons are so expensive compared to the other machines. The reason why the EEC decided on such a damaging tactic was the accusation that certain companies in Japan were swamping the European market with underpriced units.

It could be argued that such a move will help to create a fairer market. Quite frankly I don't want a fairer market, I want a cheaper printer. If the Japanese can sell printers at such a low price, I'll buy them. And what is a European printer anyway? Of those reviewed, only Panasonics are actually assembled in the community.

Panasonic KXP1081

Panasonic ■ £245 rrp ■ *AA29*

To start with, this is a similar product to the DMP2000/2160, in that it has 9 pins, a 10 inch carriage and is compatible with Epson control codes.

The good features about it are that it has a thorough A4 manual, a good NLQ mode (better than the DMP) and a switch to select condensed, draft and NLQ modes. Also, like most Panasonic printers they give the impression of being very chunky, being able to take mishandling (oops).

Often they (or the similar KXP1080) can be bought at a discount through independent distributors. And they share a common printer ribbon with the KXP1082. Well worth keeping an eye out for.



Epson LQ500

Epson ■ £803 rrp ■ *AA29*

As usual with Epson this is very well put together, with features galore – and a price to match. It handles both the up-market Sans Serif/Roman styles of NLQ, for instance. And you can get a colour-printing upgrade kit.

And it's a 24 pin printer, offering excellent quality printing. The idea is that it's good enough to compete with a typewriter. A control panel is built in to select the many different fonts available. These styles are not different, however. All the printer does is have the same style and cram different widths of text, according to the selection. Not an amazing printer, considering the price.

Amstrad DMP3160

Amstrad ■ £228.85 ■ *AA29*

Yes, for all those anaemic PC compatibles, Amstrad has brought out a pale printer. It really is almost exactly the same in its operation as the DMP2160, except that maybe it's a bit faster. Plus, more importantly, it can accept all the IBM printing codes as well as Epson's. The NLQ shares the same sensible front loading system. It's a good buy for the price.



Amstrad DMP4000

Amstrad ■ £401.35 ■ *AA20*

For those who want a real text crunching machine, this could be what you're looking for. It's a sort of halfway house for Amstrad between DMP2000/3000 home use and LQ business use.

For a start, it's a wide carriage printer. So if you want to print a very wide spreadsheet or word-processor, this can handle it quite well. More importantly though, it can really fly across the paper, getting up to about 200 cps. In NLQ this comes down to about 50 cps.

Fonts available are nothing special, consisting of the standard 9 pin Pica, Elite, condensed etc. But at least they are different fonts, rather than adjusting the spacing for the same characters.

This machine makes an interesting counter point to the LQ500. It's highest quality setting is nowhere as good as that 24 pin printer, but it can print much faster. Finally, it looks a bit more robust than the LQ500.

Contacts

Amstrad ☎ 0277 230222
Brentwood House, 169 Kings Rd,
Brentwood, Essex CM14 4EF

Dart ☎ 0502 513707
Unit B5, Oulton Works, School Rd
Lowestoft, Suffolk NR23 9NA

Frontier Software ☎ 0423 67140
PO Box 113, Harrogate, N Yorkshire
HG2 0BE

Goldmark Systems ☎ 07072 71529
51 Comet Rd, Hatfield, Hertfordshire
AL10 0SY

Panasonic ☎ 0753 73181
300 Bath Rd, Slough SL9 6JB

Epson Uk Limited ☎ 01 902 8892
Dorland House, 388 High Rd, Wembley,
Middlesex HA9 6UH

KDS Electronics ☎ 04853 2076
15 Hill St, Huntstanton, Norfolk
PE36 5BS

Seven Stars Publishing ☎ 06284 3445
34 Squirrel Rise, Marlow, Bucks
SL7 3PN

Star Micronics ☎ 01 840 1800
Craven House, 40 Uxbridge Rd, Ealing
London, W5 2BS

Epson LX800

Epson ■ £320.85 ■ AA29

Speed of printing is in keeping with the price – i.e. *extremely* fast for a 9 pin. There's a control panel for style selection, and needless to say it's Epson compatible.

Really, there's not much I can say for or against the printer, because it follows such a standard design. Well, except that reverse winding sheets through the printer takes a little more care than usual, otherwise it jams. Good, but priced a bit high.

Glossary

- **LQ** – Letter Quality: the printed text output is up to the highest standard.
- **NLQ** – Near Letter Quality: the printed text is *almost* up to the highest standard. (Depends purely on the manufacturer's outlook: there's no given formula for it.)
- **9 pin/24 pin** – Most printers still have 9 pins, which means they take time to print out and the results are dotty. 24 pin printers generally run faster and print much healthier looking characters.
- **cps** – Characters Per Second. The number of characters the printer can print in one second. Generally lower than the maker claims, because the figures take no account of such things as carriage returns or linefeeds.
- **cut sheet/continuous stationery** – Cut sheets are single sheets of paper: continuous is joined at top and bottom to other sheets.

8 Bit Printer Port
KDS Electronics ■ £19.95 ■ *AA*32

Now, if there's one thing that you really do not like is people saying the CPC isn't a good machine. One thing it lacks, though, is an eight bit printer port. Instead it has a seven bit printer port. This isn't a serious handicap, but if you've splashed cash on a trendy IBM or 24 pin printer, you'll want that extra bit, believe me: it enables you to send printer codes above 127.

Over the years many people have produced add-ons and software to boost the CPC's printing capacity, but this particular one is probably the best. You can leave it connected, and it doesn't mind at all. Saves wear and tear on the edge connectors.

In use, it requires a program to be entered first – no problem for disk owners, a pain for tape owners. You could just type it into the loader on your favourite word-processor. Using it under CPM is a bit more difficult, but nothing outrageous.

This really does help to get more out of your printer – especially so with *Qualitas Plus* (see below), which can squeeze some excellent effects out of it.

Printmaster
Siren ■ £12.99 disk only ■ *AA*19

An all singing and dancing printing utility. Yes, with this you can dump screens to your printer in a bewildering amount of sizes, design fonts for use by the printer, and print out documents with these fonts (with a maximum size of 300 lines).

And this last feature is even better than *Qualitas*: you can print in a variety of sizes. A software based printer buffer – it steals memory from your Amstrad – is also available. The only black spot to an otherwise excellent product us that you can't pre-load it into a word-processor – it's strictly a standalone program.

Image Scanner
Dart Electronics ■ tape/disk £79.95 ■ *AA*22

Now here's something different. This is a device that you attach to your printer's head. (Only fits a DMP2XXX or DMP3000.) After that you put a picture into your printer, and let the program supplied perform its task. Which is, to read pictures directly into the Amstrad.

It's pretty simple to use. Unfortunately the pictures produced are crude two tone black and white: no grey scaling is implemented. This means that pictures have a certain 'newspaper' quality about them. But having said that, it's an awful lot of fun playing about with images on your Amstrad. You can edit, save and print them out with an on board art editor. And other art programs (not to mention *Stop Press*) can really exploit this ability...

Digitizers have been around for quite a while now – and they're as popular as ever. This one has the advantage of not needing a video camera. (If you own a DMP2160, please tell Dart when you order. Otherwise the device won't work.)

8K Printer Buffer
Goldmark Systems ■ £5.50 ■ *AA*19

If you already own a DMP2160, you may want to know about this piece of kit. It lets you increase the size of your printer buffer by 6K, which means that the printer can get on with its job without tying down your Amstrad. All it consists of is a few RAM chips and a list of instructions on how to fit them.

Now for many owners this will mean using a soldering iron. If you're not happy, though, take the printer and upgrade kit down to your local electrical repair shop – they'll probably do it in under ten minutes. It's a simple, cheap and useful add-on no DMP2160 owner should be without.

Microstuffer
Frontier Software ■ £49.95 ■ *AA*23

This was a very popular product. It was a 64K printer buffer, a device to temporarily record information going to the buffer. Very useful, and quite cheap at the price of £49.95. Regrettably, they are now out of production. But fear not. The Supra Corporation of Oregon (that's in the USA, Europerson) are busy designing a new *MicroStuffer*. This will be quite similar to the old one, but is to have an upgrade facility, enabling you to install new memory chips. Andrew Bennet of Frontier has said that it should be available sometime 'in October or November'. The price, (and name) has yet to be decided.

Qualitas Plus
Seven Stars Software ■ £12.95 tape, £14.95 disk ■ *AA*32

Very useful piece of software this. It is a bit like a turbo charger for your CPC, helping it to produce printed output way outside its design limits.

First, you need to configure it to your particular word-processor/printer combination. After this it asks you which fonts you want to load. These fonts are external to the program, and there's several to choose from – Clarion, Elite, Mercury, Piazza and Pica. These can be edited with an editor, and more fonts are available from Seven Stars.

Now when you print, you can get micro-spaced text in the font of your choosing – or indeed, designing. And it really does look very, very good. On the minus side, however, it takes about 15% longer to print.

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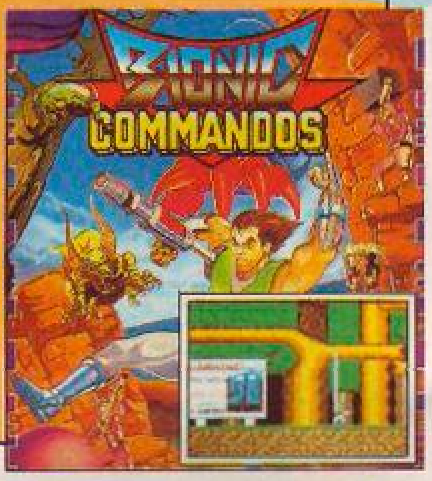
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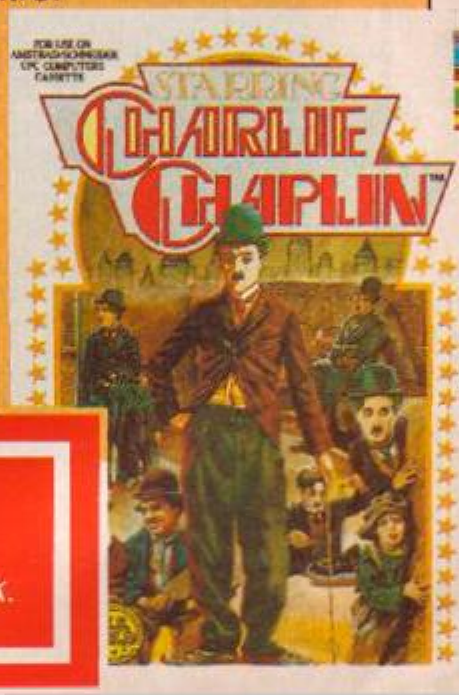
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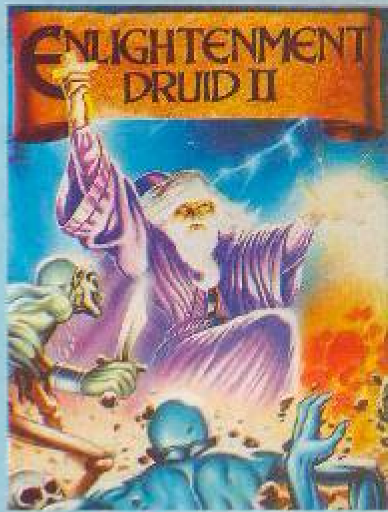
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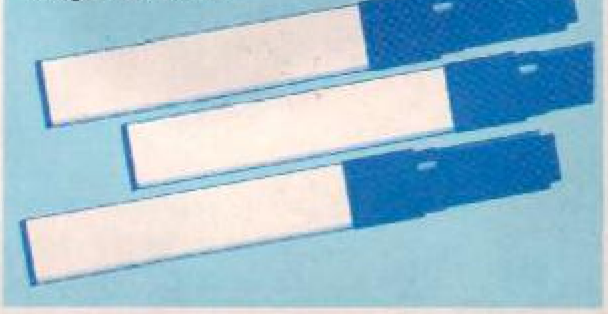
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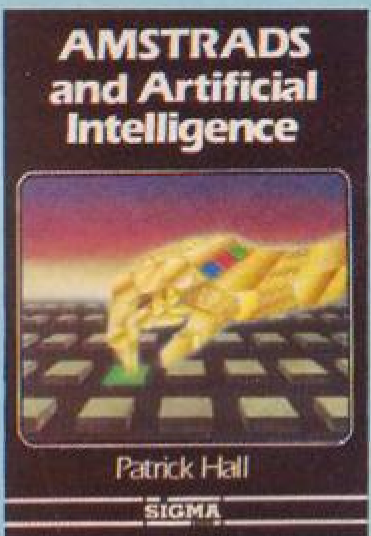
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BACK ISSUES
Expand your Amstrad Action collection!

If you're one of the thousands of readers who've joined Amstrad Action only recently, you'll want to catch up on some of the good things you've missed. Here's how to do it. We have limited numbers of the back issues listed below, which we're selling at cover price with post and packing free.

Issues 8 and 16 may be of particular interest, as both include free cassettes packed with good software. Two series also went down very well. Andrew Wilton's programming course in Basic for absolute beginners ran from issues 8-17, while a series of articles on the CP/M operating system ran from 10-17.

All issues contain numerous game reviews, Type-Ins and Pokes, all making up the best in Amstrad action past and present.

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AA DUST COVERS
2-piece set only £6.95

Let's face it, computers don't like dust. Over a period of time it can make them very ill indeed: disk drives and cassette decks in particular can suffer serious, sometimes fatal damage.

A set of dust covers provides a neat solution. And there's the added bonus of smartening up the hardware's appearance when it's not in use.

The specially-commissioned Amstrad Action covers are made from high-quality, water (and coffee) proof PVC. They're coloured a gentle beige with smart blue trimming and matching AA logo.

You can order a 2-piece set tailor-made for your CPC system – just choose the correct order code from the list next to the order form.

Order Codes

464 mono - A208	664 colour - A211
464 colour - A209	6128 mono - A212
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24 HOUR CREDIT CARD ORDERS 0458 74192

THE THINGI
Only £5.95 – save £2!

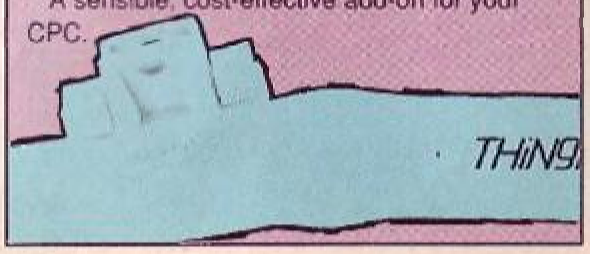
What's white, dangles paper next to your computer screen, and costs two pounds less than in the shops? Yes, a Thingi bought through Amstrad Action.

This remarkable computer accessory – an idea so simple it's ingenious – could dramatically ease your hours at the keyboard. It's basically a cleverly-shaped piece of plastic that attaches via Velcro to the top of your micro. But with a Thingi on your CPC you can have documents, letters or program listings clipped right next to the screen in perfect reading position.

Any task involving copying off paper is thereby made much easier and faster. In fact, the coloured clip supplied is sturdy enough to support an issue of Amstrad Action open, say, at the Type-ins section.

The Thingi comes in two versions, one for positioning to the left of the screen, the other to the right – the Velcro attachment allows easy readjustment or temporary removal.

A sensible, cost-effective add-on for your CPC.



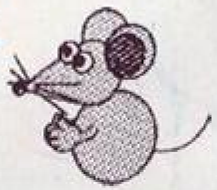
SIREN SOFTWARE
2-4 Oxford Road, Manchester M1 5QE. Tel.: 061-228 1831



NEW

MASTER MOUSE

NEW



Available at last for your Amstrad 464/664/6128, a high quality low cost mouse! This 3 button mouse (as used by our competitors) uses the latest in optical mouse technology combined with a low friction ball to make it a pleasure to use. The simple to connect interface ensures full compatability with all AMX compatable software. The package is completed with our drawing package "Cherry Paint" on disc.

MASTER MOUSE
available now only **£49.99** fully inc.
SAVE £9.99!!
MASTER MOUSE & MICRO DESIGN
together for only **£64.99**

NEW *** HACKIT *** NEW

The HACKIT interface must be the most valuable tool for all hackers and program developers with Amstrad CPC computers. The HACKIT allows you to stop any program at anytime with the push of a button and then allows you to disassemble, edit, search, save etc.

* Full screen display, no messing in small windows
* Allows memory to be saved to disc
* Display used and unused areas of memory
* Over 30 commands give you full control over your computer
* Interface totally invisible to ALL software
* Full printer support
* Stop and examine programs, loaders etc whilst they are running.
* On screen help and prompts etc.
* Search for infinite lives pokes, high score tables etc.

On a standard 6128/664/464 Hackit will preserve memory from £40 to £A67F. On a 464/664+64K, all memory will remain intact.

PLEASE NOTE:- Hackit is not an automatic program copier, a reasonable knowledge of Z80 machine code is needed to achieve best results.

HACKIT is available now priced only £29.99

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Manchester M1 5QE. Tel.: 061-228 1831

VISA

SIREN SOFTWARE
2-4 Oxford Road Manchester M1 5QA Tel. 061-228 1831

MicroDesign

by Hagsoft

MicroDesign is a powerful new design and artwork package for the amstrad cpc microcomputers, allowing the user to design and print up to an entire A4 page.

The unique keyboard layout and full on-screen menus offer unparalleled ease and speed of operation, and with the high priority given to the quality of the output, the printing software gives unsurpassed results from any Epson- or IBM-compatible dot-matrix printer.

From technical diagrams to greetings cards, MicroDesign offers the novice and professional alike a unique combination of power, versatility and ease-of-use at an unbelievable £24.99.

MicroDesign OPERATES AS FIVE 'PAGES'...

LAYOUT PAGE: AN OVERVIEW OF THE ENTIRE DRAWING AREA
- UPRIGHT A4/SIDEWAYS A4/HI-RES STRIP FORMATS MAY BE USED.
- FULL CUT & PASTE FACILITIES ALLOW MANIPULATION OF THE WHOLE PAGE LAYOUT WITH UNDO/REDO.

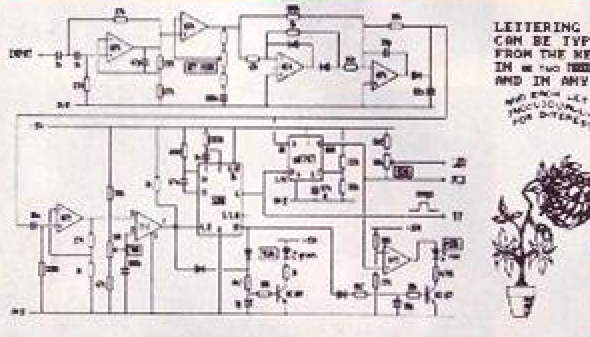
DESIGN PAGE: DESIGN OPERATIONS INCLUDE:
- FULL CUT & PASTE WITH AREA [illegible], [illegible] & NEGATIVE
- FOUR TEXT SIZES/STYLES AVAILABLE FROM THE KEYBOARD
- LINE, ANGLE, CIRCLE, OVAL, RECTANGLE, TRIANGLE & DIAMOND WITH FULL CONTROL OF OUTLINE AND FILL STYLES
- PATTERNED FILL USING USER-DEFINABLE SHADES/TEXTURES
- ICON MENU (REMOVABLE) HOLDS 66 USER-DEFINABLE ICONS IN TWO SIZES WHICH CAN BE REFLECTED/ROTATED/NEGATIVE.
- 2-SPEED CURSOR MOVEMENT AND REAL-TIME SCROLLING ACROSS THE DRAWING
- THREE SIZES OF POINT-PLOTTING/PAINTING
- UNDO/REDO
- ZOOM FOR DETAILED PIXEL EDITING

ICON DESIGNER PAGE: FULL DESIGN/EDITING FACILITIES FOR FOR 16x16 & 24x24 PIXEL ICONS.

FILING PAGE: DISC OPERATIONS INCLUDE ...
- SAVING/LOADING OF ALL OR ANY PART OF THE DRAWING AREA.
- STORAGE/RETRIEVAL OF ALL OR PART OF THE ICON SET.
- CATALOG/DELETE/RENAME OPERATIONS.

PRINTING PAGE: PRINTS ALL PAPER FORMATS ...
- FULL/HALF/QUARTER SCALE, DARK/LIGHT SHADES.
- ONE-PIN OPTION FOR HIGHEST-QUALITY OUTPUT.
- MULTIPLE COPIES etc.





LETTERING CAN BE TYPED FROM THE KEYBOARD IN FOUR SIZES AND IN ANY DIRECTION

RIGHT, DOWN, LEFT

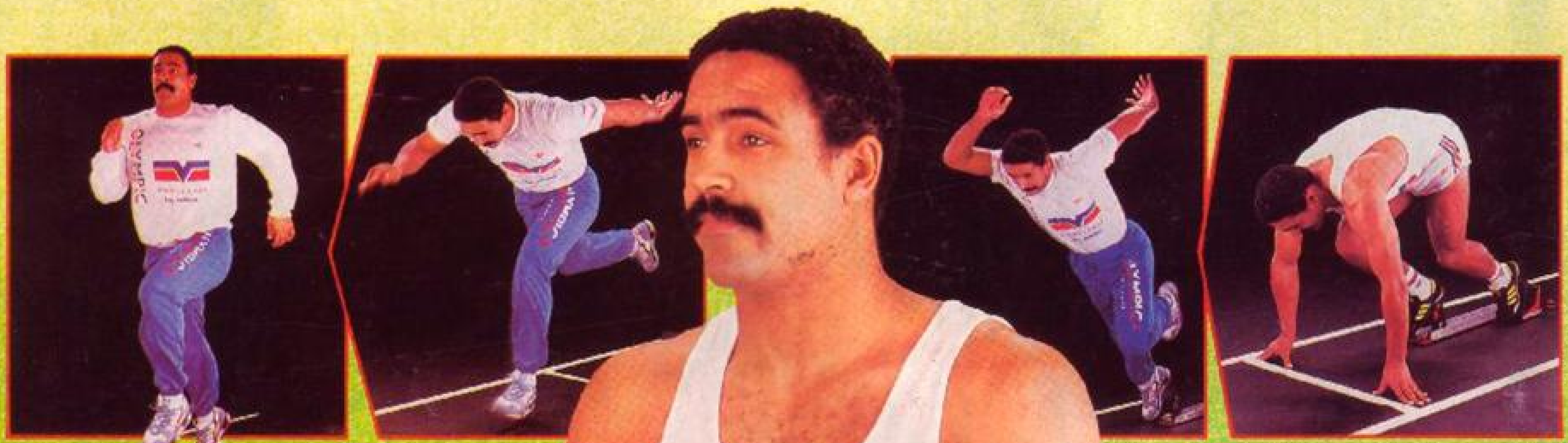
AN RSX UTILITY PROVIDED ALLOWS DRAWINGS FROM BASIC PROGRAMS TO BE USED WITH MICRO DESIGN

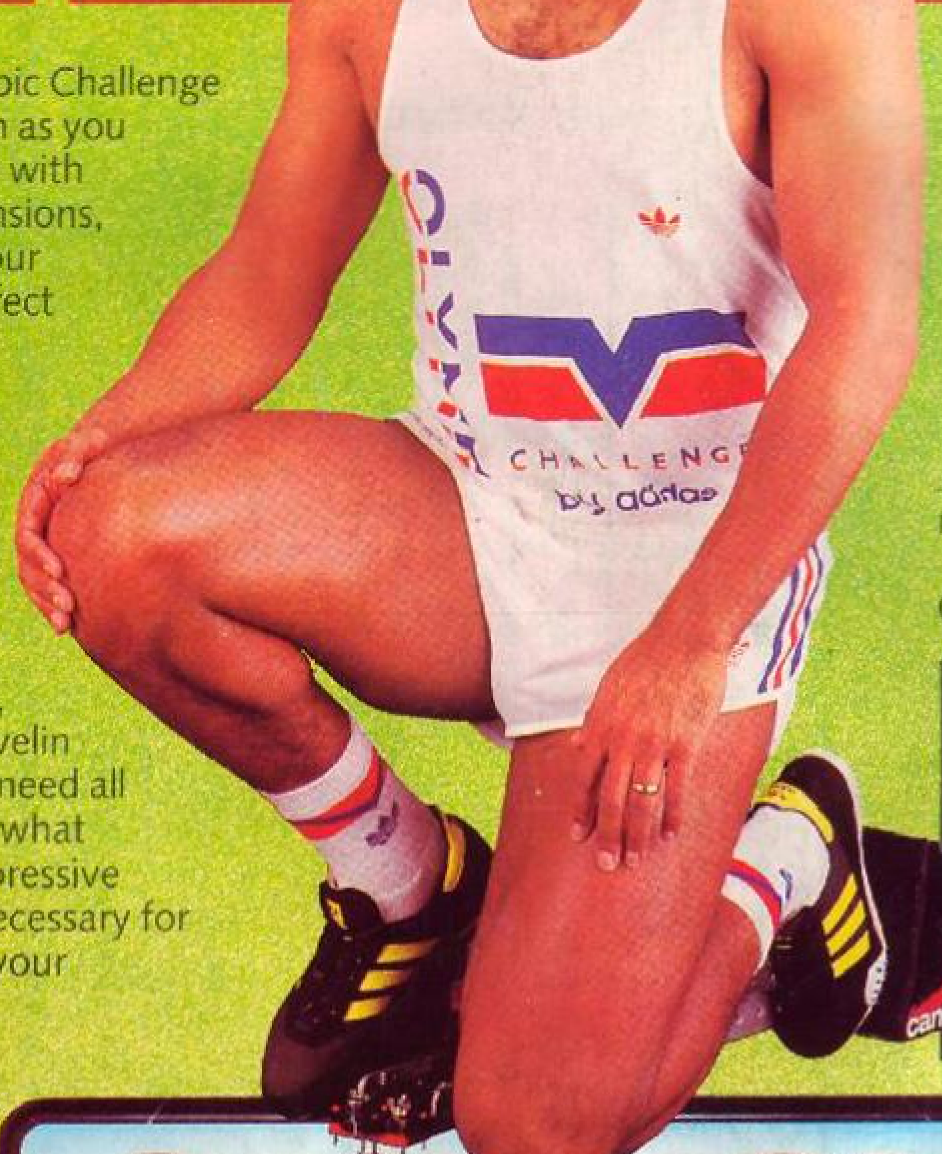
and several fonts are supplied as icon sets for lettering etc...

MicroDesign ONLY £24.99
For: cpc 6128
cpc 664 +64K RAM
cpc 464 +64K RAM + DISC DRIVE

this page produced entirely using cpc6128, MicroDesign and a £200 printer

DALEY THOMPSON'S
OLYMPIC CHALLENGE





Enter the 1988 Olympic Challenge with Daley Thompson as you 'work out' in the gym with Bicep Curls, Leg Extensions, and Sit Ups, where your efforts will directly affect your performance in the competition itself – another first from Ocean.

Ten Olympic events include Long Jump, Shotput, High Jump, 100m Sprint, 400m, 110m Hurdles, Discus, Pole Valut, Javelin and 1500m. You will need all your skills to build on what you hope was, an impressive work-out, and as is necessary for all top flight athletes your judgement to select the most effective equipment for each event is now vital – a decision which can win or lose you a place on the podium.

But this isn't just another sports simulation, this is a Daley Thompson 'event' where all his talent and humour burst through to make thrilling and entertaining game play for all the family. Go for the Olympic Challenge!

